

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXXIII. NEW YORK, SATURDAY, OCTOBER 29, 1898.

No. 18.

ORIGINAL ARTICLES.

CARBONIC-ACID GAS; ITS PHYSIOLOGICAL ACTION AND THERAPEUTIC EFFECT, AS SEEN IN EMPHYSEMA OF THE LUNGS, ANEMIA, WHOOPING-COUGH, DYSENTERY, AND IMPOTENCE.

By A. ROSE, M.D.,
OF NEW YORK.

1. The Physiology and Chemistry of Respiration.

—Carbonic acid is a constant constituent of the animal organism. The minor portion of the carbonic acid is obtained from the atmosphere and nutriment, the major part from the tissues and blood, forming one of the most important end-products of oxidation and tissue metamorphosis. It develops the effects of a weak acid, and like alcohol, those of an excitant and paralyzing agent. It enters the blood through the capillary circulation from the tissues in which it is formed. The gases occurring in the blood under physiologic circumstances are oxygen, carbonic acid, and nitrogen. The latter is present only in minute quantities and seems to play no important rôle in the vital processes, its quantity in different parts of the circulation being approximately the same. The amounts of oxygen and carbonic acid in the blood derived from various parts of the circulation differ in accordance with the rapidity of the blood current, different temperature, rest and labor, etc. Oxygen is contained in the arterial blood of man, according to Setschenow, to the amount of 21.6 per cent. by volume. Ludwig and Szelcow found 6.8 per cent. of oxygen by volume in the venous blood of non-active muscles, and still smaller quantities in that of those in action. Oxygen is entirely absent, or present only in traces, in the blood of the asphyxiated. Zuntz states that the venous blood of the right heart contains on an average 7.15 per cent. less of oxygen than the arterial blood.

The quantity of carbonic acid contained in the arterial blood is usually 40 per cent. by volume and varies between 30 and 40 per cent.; it always corresponds exactly or very nearly so to the amount contained in the air of the alveoli. Every change in the composition of the alveolar air must be followed by a corresponding change in the tension and the absolute quantity of the carbonic acid in the arterial blood. Again, the carbonic-acid tension of the ar-

terial blood affects primarily the diffusion between the blood and the tissues; hence, any variation in the proportion of carbonic acid in the alveolar air, continuing for some time, will cause a corresponding change in the proportion of the carbonic acid of the blood and tissues. The proportion of carbonic acid contained in the venous blood varies still more. According to Zuntz's calculation, the venous blood of the right heart contains 8.2 per cent. of carbonic acid more than the arterial blood. The average quantity is about 40 volume per cent. In the blood of the asphyxiated, Holmgren found even 69.21 volume per cent. of carbonic acid.

Almost all the oxygen in the blood is loosely held by the oxyhemoglobin, and only a small portion, 0.26 per cent., is absorbed by the plasma or serum. The circulating blood does not appear to carry oxygen entirely up to the point of saturation. Of the carbonic acid found in the blood the smaller portion, according to the examinations of Alex. Schmidt, Zuntz, and L. Frederiks, about one-third, is contained in the blood-corpuscles, but by far the larger quantity is carried by the plasma and serum. The carbonic acid in the blood-corpuscles forms a loose chemical union, firstly with the alkalies which there enter into combination with phosphoric acid, oxyhemoglobin or hemoglobin and globulin, and secondly with hemoglobin itself. In the presence of a preponderance or of a greater partial pressure of carbonic acid, the relations of the alkali compounds to carbonic acid undergo changes. Hemoglobin possesses the ability to absorb the two gases, oxygen and carbonic acid, independently of each other and simultaneously. The major amount of carbonic acid in the blood is found in the plasma or serum; it is more abundant in the serum than in the blood itself. One part is simply absorbed, the larger part is in loose, and the smallest part in firmer chemical union; the quantity which is simply absorbed could not be exactly determined. Setschenow estimates that in the serum of the dog it forms about one-tenth of the entire carbonic acid contained in the blood.

The quantity of carbonic acid in firm chemical combination must be determined by the amount of alkali-carbonates. It is, however, not exactly known, inasmuch as the alkalies of the blood are not only associated with carbonic acid, but also with other components, especially with the albumins. The amount of the carbonic acid in the blood corre-

sponds with the amount of alkali. Such, for instance, is the case when poisoning with mineral acid takes place. Thus Walter found only 2 to 3 volume per cent. of carbonic acid in the blood of rabbits, into the stomach of which he had introduced muriatic acid. The oxygen of the blood exists in dissociable combination with the hemoglobin, and this combination, the oxyhemoglobinic, depends on a certain partial pressure of the oxygen, varying with varying temperature. The same is the case with carbonic acid in blood, that contained in the corpuscles as well as that in the plasma; it exists there in combinations which depend to a high degree on partial pressure.

Quite a number of elements act together with carbonic acid, making it apparently impossible to decide the quantitative part of each single factor in the entire effect.

It is of great importance to know the amount of tension of oxygen and carbonic acid in the blood in order to decide the question of the exchange of gases between the blood and the alveolar air on the one hand, and the blood and the tissues on the other; especially to decide in how far this exchange of gases takes place under the laws of diffusion and in how far, also, other forces may be active. The change of gases in the tissue, the so-called internal breathing, takes place in the following manner: oxygen leaves the capillaries to enter into the tissues and simultaneously the main mass of the carbonic acid of the blood which originates from the tissues, leaves the latter and enters into the capillaries. The change of blood in the lungs, the so-called external breathing, is the taking up of oxygen by the blood from the air in the lungs, and giving up of carbonic acid into the latter. These processes of the double gas exchange are not yet sufficiently explained. The question which is yet to be solved is: does the exchange of these gases take place in consequence of the difference between their tensions in the blood and in the air in the lungs, by the laws of diffusion, or are there other factors active?

At present we cannot produce sufficient reasons for abandoning the view generally adopted, that the entrance of oxygen into the lungs takes place simply by means of diffusion; and further, that the amount of oxygen in the blood—within certain limits—does not especially depend on the amount of oxygen in the atmospheric air. Indeed, it is known that the increase of the oxygen pressure, even to the strength of one atmosphere, has no essential influence on the amount of oxygen taken into the lungs and the amount of carbonic acid which is exhaled. Animals placed in pure oxygen under a pressure of three atmospheres suffer convulsions and perish quickly.

This oxygen intoxication is characterized by extraordinary reduction of consumption of oxygen. All organisms, animal as well as vegetable, succumb alike. Oxygen exerts a deleterious effect in the different organisms when they are exposed to it for a greater length of time, even at a tension far below the one which kills quickly.

When we inhale pure oxygen its consumption and the formation of carbonic acid become diminished. The deleterious effect of excess of oxygen and over-accumulation of carbonic acid when working together cause an animal to perish even when neither of the two gases by itself is present to a dangerous degree. Although carbonic acid is excretory matter, and life can only be continued when this gas is eliminated from the system regularly by rhythmically returning respiration, it would be erroneous to deny it all further rôle in the economy of the system. The carbonic acid in our organism with its normal quantitative changes seems to be necessary to excite important vital functions, especially respiration and circulation. The symptoms of intoxication when excessive quantities of the gas have been inhaled, may be explained, to some extent, as exaggerations of normal physiologic processes.

Concerning the elimination of carbonic gas in the lungs we are still without reasons for abandoning the generally adopted view according to which the carbonic-acid gas coming from the blood enters the lungs simply by the law of diffusion. There is a considerable difference between the pressure of the oxygen in the blood and the oxygen in the tissues, and owing to this difference of pressure the tissues are supplied with the necessary amount of oxygen. Quite the opposite is the case with carbonic acid; its tension is higher in the tissues than in the blood, and all the investigations thus far made have produced no evidence against the assumption that carbonic acid from the tissues enters the blood simply by the laws of diffusion.

Considering even superficially the quantities of oxygen in the blood it appears at once plain enough that the main amount cannot have been absorbed physically, for the serum of the blood, as a solution of indifferent substances, absorbs less oxygen than pure water—it can absorb 0.3 volume per cent. of oxygen from the atmospheric air at the ordinary temperature of the body. In reality, however, arterial blood holds not less than seventy times this quantity of oxygen. The same applies to carbonic acid, the largest part of which, as has been shown, is held in chemical union in the blood and cannot to any great extent be absorbed physically. The partial pressure of the carbonic acid in the blood is much too small to allow the gas to be simply absorbed.

The comparison of the gases of the arteries with those of the veins is of great importance because it furnishes directly the evidence that real processes of combination do not occur to a considerable extent in the lungs, but almost the whole amount of oxygen which has entered the lungs can be separated from the blood of the arteries by means of the exhaust-pump.

The mass of inspired air has to be divided in regard to its action on the renewing of the air in the alveoli into two parts. A certain amount remains in the upper air passages and is removed again by expiration; the rest enters into the alveoli to mix with the air which is there already; on account of the smallness of each single infundibulum it is likely that the diffuse mixture of old and fresh air takes place momentarily while the bronchial tubes are too long to allow the exchange of their gases with those of the alveoli by diffusion, which certainly could hardly be accomplished in the time between two respirations. The next process in respiration is that air from the alveoli takes the place of the expired contents of the bronchi, and only when the extent of the expiration exceeds in volume that of the air-passage, alveolar air will pass out directly. The movements of respiration, therefore, can have but little success when the volume of each expiration does not exceed that of the air-passages; that is, does not more than exhaust the contents of the air-passage. Thus, a very superficial breathing will only insufficiently ventilate the alveoli, even when the frequency of respiration is increased. The expired air is the richer in carbonic acid and the poorer in oxygen; the larger part of it comes from the alveoli, that is, the more profound the expiration.

2. *Inflation of the Large Intestine with Carbonic-Acid Gas for Diagnostic Purposes.*—H. v. Ziemssen was the first who, in the year 1883, described and published experiments to establish the value for diagnostic purposes of artificial inflation of the large intestine. His method is to develop the gas within the intestine by introducing through a rectal tube, first bicarbonate of soda, then water, and finally tartaric acid. Rosenbach has published the results of a large number of experiments made on the living subject and also on the cadaver by inflating the large intestine with liquefied carbonic acid. The selection of liquefied carbonic acid in place of the effervescent mixture offers a number of advantages: (1) it allows an exact dosage; (2) the induction of the gas is absolutely uniform and constant; (3) the inflation may be interrupted at any desired moment, and be continued again at will, and for this reason much larger quantities of

gas may be introduced; (4) there is no liquid applied together with the gas; (5) the pressure under which the gas enters is a much higher one; (6) there is no apprehension of accidents which are apt to happen when the two components for the development of the gas are introduced separately.

The carbonic-acid gas is taken from an iron reservoir, in which it is contained in the liquefied form; a double stop-cock is attached to regulate exactly the flow of the gas from the container, where it is, naturally enough, under high pressure. The carbonic acid in escaping from the reservoir at once assumes the gaseous form. From the reservoir it passes first into a bottle filled with water. This is for the purpose of enabling one to observe and to control the celerity of its escape. From this bottle it enters into an elastic tube with a nozzle for the rectum at the end. The nozzle having been inserted into the rectum the stop-cock is opened to such a limited extent that one is enabled to count the gas-bubbles passing through the water. A few seconds after the gas enters the rectum there is produced a sensation of warmth, then a slight desire to evacuate the bowel, which immediately passes away. In patients who avoid pressure and control the levator there is no voiding of gas, the muscular closure sufficing to retain it; in some cases it is advisable to secure closure by means of a rubber valve fastened to the rectal tube, which valve is pressed against the anal opening. If even this means should fail to securely close the opening one may simply increase the amount of gas entering by opening the stop-cock somewhat wider; then while more gas enters than escapes, a satisfactory filling up of the intestine takes place. The abdomen gradually becomes expanded and when the patient commences to complain of tension the induction is discontinued. It is well to inflate an empty rectum in order to avoid obstruction of the tube by fecal masses. The amount of gas entering the intestine may be measured; for practical purposes, however, it is of no importance to know the exact amount.

Rosenbach has given a very thorough and exact description of the behavior of the intestinal tract when inflated with carbonic-acid gas and his observations are of great value for diagnostic purposes. They are of great importance to us in so far as they furnish conclusive evidence that carbonic-acid gas may be employed with perfect impunity. When the inflation is carried out *ad maximum* the lower part of the abdomen becomes expanded, the abdominal walls are under great tension, but notwithstanding the liver is not at all or only very slightly pushed upward; on percussion over this organ the dulness remains about as before; there is no raising

of the diaphragm, and consequently no retraction of the lungs; no dyspnea is observed; no cyanosis. Persons experimented on may complain of disagreeable tension of the abdominal walls, but even this unpleasantness disappears more and more as the patient becomes accustomed to inflation.

Rosenbach's experiments confirm the well-known fact that we cannot, by way of the rectum, inflate the small intestine; especially conclusive in this regard are his experiments on the cadaver. The inflation cannot be carried out beyond a certain limit, which limit corresponds exactly to that noticed in the living. In attempting to force induction beyond this limit he did not succeed; gas would escape through the anus or it would find such strong resistance that no more could enter. He carefully opened the abdominal wall without injuring the intestine and was able to convince himself that notwithstanding the considerable meteorism the inflation did not extend beyond the ileocecal valve.

(To be continued.)

XEROSTOMIA, OR DRY MOUTH; REPORT OF A CASE.

By AUGUST JEROME LARTIGAU, M.D.,
OF ALBANY, N. Y.;

ASSISTANT IN PATHOLOGY AND BACTERIOLOGY IN THE BENDER
HYGIENIC LABORATORY; LECTURER ON CLINICAL MICRO-
SCOPY IN THE ALBANY MEDICAL COLLEGE.

IN 1888 Mr. Jonathan Hutchinson and Dr. Hadden, before the Clinical Society of London¹ called attention to the peculiar condition known as xerostomia, and each reported a number of instances of this very infrequent and little known affection. Several other cases of the disease were also mentioned at the same meeting by other members of the society. Some conception of its rarity may be formed from the meager number of references which I have been able to find in medical literature. Dr. Thomas Harris² of Manchester, England, in a very recently published paper upon this subject was not able to collect reports of more than twelve cases. But in looking over the literature I have been able to find reports of several other cases which either had escaped Dr. Harris' notice, or have been published subsequently to his paper, making the total number of cases less than two dozen in all.

The following case came under my notice some years ago. In addition to the usual clinical presentation of such cases, the patient presented symptoms of a very striking and very unusual order:

E. L., widower, sixty-four years of age, came under my observation on January 20, 1895, complaining of marked dryness of the mouth and a very painful condition of the tongue. His father died of

pneumonia at the age of fifty-one years, his mother of Bright's disease, aged forty-seven. Two brothers were living and healthy. Two sisters were living, both highly nervous women, one the subject of *crises nerveuses*, as the patient expressed it. The other sister had been the subject of violent periodical headaches for years. There was no history of ordinary diseases of childhood, chorea, pneumonia, malarial or typhoid fever. The patient denied luetic or other venereal infection. He had always been of a markedly nervous disposition.

The dryness of the mouth came on about five months before coming under observation, and about six weeks after the tragic death of his wife. Its onset was insidious and it was only when the condition became well marked that the patient's attention was seriously called to his affliction.

At the time of the first examination the following note was made: "Mr. L. is a sparely nourished, extremely nervous man; skin is quite dry; mucous membrane of lips and eyelids pale; pupils normal, conjunctivæ moist; lips dry and slightly fissured. Tongue is dry, moderately fissured, and covered with grayish-brown sordes. Mucous membrane of mouth dry, but otherwise quite normal in appearance. Pharynx is likewise dry; tonsils are somewhat enlarged; teeth are in fairly good condition. The parotid, sublingual, and submaxillary glands are normal in size, and the patient denies the existence of any enlargement of these glands at any time. Cervical glands not enlarged. The acuity of the sense of taste is somewhat diminished."

Salivary papillæ were not prominent. The mucous membrane of the nose had been normal, as was also the sense of smell. The heart, lungs, liver, and spleen gave no apparent evidence of functional or organic abnormality. The urine contained a trace of albumin and some hyaline and granular casts. Repeated examinations for sugar were made, but always with a negative result. Several examinations of the blood showed a very slight secondary anemia.

The degree of the mouth dryness was at all times considerable—enough to cause marked discomfort, and so much so at times as to become intolerable. These fluctuations of intensity were very appreciable subjectively, the patient stating that the dryness was less marked during the cold, moist season; in hot, dry weather, on the other hand, there was a distinct diminution of the salivary secretion, with the resulting more marked dryness of the mouth.

The skin was markedly less active than previous to the onset of the trouble, prior to which time the patient perspired on the slightest provocation, but since the disturbance perspiration ordinarily was no longer excited except on considerable and prolonged physical exertion. Furthermore he had observed that an improvement in the salivary function was accompanied by a slight corresponding amelioration of the cutaneous perturbation, and the more marked the improvement of the former, the more evident the closer return to the normal of the latter. Objectively, at no time had there been any apparent sensory or motor disturbances of any kind whatsoever.

Diet had been largely limited to liquid and semi-solid food.

From the time of my first examination in 1895 until July, 1898, the patient followed a number of treatments of various nature, with varying success. Iron, iodid of potassium, various salts of arsenic, mercury, and pilocarpus in different forms have been administered. Electricity was also used for a considerable length of time, and treatment by suggestion was attempted, but with no better success than with electricity. For a time during an aggravated period of the affection the pilocarpus relieved the dryness, but soon the efficacy of this remedy was lost. Arsenic similarly proved useful for a comparatively short time. At the present time the patient is in about the same condition that he was when first seen about three and one-half years ago.

The clinical ensemble of xerostomia is a fairly constant entity, as exemplified by the majority of the reported cases, which in a general manner have a more or less evident resemblance to each other as regards symptomatology and prognostic termination. The arrest of the salivary secretion and the resulting dryness of the mouth are, *par excellence*, the preeminent symptoms of this malady. The greatly restricted, or complete cessation of the salivary flow not only involves the parotid, submaxillary, and sublingual glands, but likewise affects the secretion from the buccal glands. This inhibition of the salivary secretion in its aggravated forms is so considerable in certain cases as to result in conditions of actual pain. Enlargement of either the parotid, submaxillary or sublingual glands is exceptional and unusual, but I have been able to find reports of four such cases in literature in which the augmentation was limited in three to the parotid, and in the fourth case, in addition to the parotid involvement, the submaxillary became similarly affected. This increase in size of the parotid gland occurs in two different forms: one, in which the parotid gland remains permanently enlarged, and in the other in which the augmentation in size is intermittent and very variable in duration. The only case of permanent enlargement of the parotid in this disease is that reported by Dr. Thomas Harris³; those of temporary duration were recorded by Mr. Jonathan Hutchinson⁴ and by Dr. Battle.⁵ The case observed by Dr. Battle is the only one in which, in addition to the parotid enlargement, the submaxillary gland has shown implication. This consisted of an intermittent augmentation in size, recurring at intervals of three or four weeks.

Another curious symptomatic association with the mouth dryness in some cases is the accompanying dryness of the mucous membranes of the nose and eyeballs, so that in the latter case the patient is quite unable to shed tears. A case of this kind was pub-

lished some years ago by professor Fraser of Edinburgh.⁶ The sense of taste and smell in a few recorded instances is mentioned as having suffered depreciation, but this is rare and when present variable in its degree. In Dr. Harris' patient this impairment was moderately well marked.

The occurrence of a marked diminution of the cutaneous activity consequent upon the onset of the salivary disturbance in my patient, and the apparent existence of a functional intimacy between the salivary structures and the cutaneous apparatus is indeed curious in view of the fact that these organs are apparently totally unrelated, not only from an anatomic standpoint but likewise physiologically. This association of a cutaneous trouble with xerostomia is unique in the literature of dry mouth. The nature of this disturbance no doubt belongs to that same category as those in which the lacrimal and nasal secretions were interfered with.

As already mentioned, the salivary involvement includes physiologic derangement of more than the parotid glands alone. The other salivary and buccal glands also exhibit the same phenomena observed in the other implicated organ. The arrest of the gland secretions of the mouth cannot be explained on the ground of structural alterations in the parotids which are, apparently, very infrequent in the first place, and, moreover, the acceptance of such a conception would offer no pathologic solution of the functional implication of the other functionally affected structures.

The opportunities for the anatomic study of the organs from this class of cases have been extremely scanty and uncertain, but probably the records of future extended researches will bring evidence which will justify the classification of this disease as one of functional derangement of the nervous system. There is much, in the light of our present knowledge regarding this affection, which points to it as of this nature. The intimate relationship of the cutaneous function with the salivary trouble and the corresponding fluctuations of functional activity of both sets of organs, as well as the clinical evolution of the disease, in the case here reported, strongly suggests the probability of a functional disorder of the nervous mechanism. In some of the cases recorded a definite neurotic history is mentioned, but not in all. In the patient, the subject of this report, the neurotic factor is prominent and lends some additional support to the theory of the functional character of the malady.

Xerostomia is essentially a disease of middle or advanced life, the occurrence of a case in a subject under forty years of age being quite exceptional; the majority of the patients are more than fifty. It is

interesting to note that these patients are, with the exception of the features peculiar to this disease, apparently quite well in every other respect. Sex apparently predisposes to its production since almost all the cases thus far observed have occurred among women. The onset may either be sudden or, as is more often the case, insidious.

As regards treatment little can be said of a very certain nature except, perhaps, that the prognostic results have proved uniformly bad, as far as a complete cure is concerned. Dr. Arthur J. Sharp¹ has very recently published an instance in which much improvement occurred from the use of medium-sized doses of mercuric iodid and quassia. Pilocarpin as a therapeutic agent of temporary benefit has probably yielded the best results in the hands of others, as well as in my own.

BIBLIOGRAPHY.

¹ *Transactions of the Clinical Society of London*, xxi, p. 180, 1888.

² On "Dry Mouth," or Xerostomia, by Thomas Harris, M.D., *Amer. Jour. of the Med. Sciences*, March, 1898.

³ *Loc. cit.*

⁴ *Clinical Society of London, Ibid.*

⁵ Battle, *Clinical Society of London*, February 5, 1898 (*British Med. Jour.*, February 16, 1898).

⁶ Fraser, *Edinburgh Hospital Reports*, vol. i, 1893.

⁷ Arthur J. Sharp, *Lancet*, London, p. 1114, April 23, 1898.

For more complete bibliographical references consult appended list to Professor Fraser's paper and Dr. Thomas Harris' article.

THE TREATMENT OF ADHERENT RETROPOSED UTERI.¹

By W. R. PRYOR, M.D.,
OF NEW YORK;

PROFESSOR OF GYNECOLOGY IN THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL; CONSULTING GYNECOLOGIST TO THE CITY HOSPITAL.

THERE is much information desired regarding the exact manner in which the adhesions are produced. Certain cases give no history of labor or abortion, no attacks of gonorrhea, no unclean intra-uterine manipulations, yet upon examination, the retroversion and fixity are perfectly apparent. Upon operating for the relief of such a case little or no disease of the ovaries or tubes is found. The question suggests itself: Could not the effusion of lymph be due to the displaced uterus resting immobile upon a portion of bowel equally fixed, the rectum, and be an exponent of a low form of peritonitis due to migration of pathogenic germs from the bowel? It is this form that we see most often in robust servant-girls. The period at which the displacement occurred is unknown, as is the time when the union took place between the uterosacral and rectal structures,

¹ Read before the American Gynecological Society, Boston, May 24, 25, and 26, 1898.

and the uterus. These women are very often untouched virgins. The bladder is attached low down on the uterus, and the anterior vaginal wall is remarkably short. Upon severing the adhesions the uterus can be lifted up, but upon being released immediately assumes a retroposition again. Retroflexion is as marked as retroversion. I have been unable to cure such cases by any operation. Fortunately they are rare. I have met with but five. I have classed them as congenital and incurable by any known operation. The vagina is too short for either hysterorrhaphy or the operation through the posterior cul-de-sac. They are either congenital or have originated early in infancy.

As we commonly meet with adherent retropositions, they can generally be traced to some form of infection, Abortion and labor followed by sepsis undoubtedly cause most of them; but gonorrhea is found to produce them also. According to the manner in which the infection reaches the peritoneum, the complicating lesions in tubes and ovaries will vary. The most pronounced adhesions are found in cases recently pregnant, and those cases also present the least amount of tubal disease. Where gonorrhea causes the retroposition and fixity the tubes are most damaged, and the adhesion between the uterus and the retro-uterine structures is least. As a result, we find that conservative treatment of the adnexa in the cases following pregnancy can be most often applied, while in cases of gonorrheic origin, the adnexa are most frequently to be sacrificed.

Certain it is that at the time of operation, in all cases, the degree of adnexal disease is found to be far more extensive than was revealed by examination. And so it happens that those who have seen many of these cases from the peritoneal side are loath to recommend massage and forcible replacement.

Because of the very usual presence of more or less disease of the tubes and ovaries, operations for the relief of adherent retroposition are not to be judged by the number of pregnancies which follow. Rather is a pregnancy subsequent to the operation to be considered a triumph of such conservative work as has been applied to the adnexa. But should pregnancy follow any operation for adherent retroposition and be interrupted by conditions existing in the maternal organs, which conditions were present before the operation or induced by it, I should say that that operation was a failure.

I would, then, apply these tests to all operations which seek to remedy the conditions under discussion:

1. If the woman has conceived and aborted while the displacement existed, and this has not been followed by an increase in the pelvic lesions, the op-

eration should place her organs in such condition that she can go to full term.

2. If the woman has been sterile before the operation, and remains so afterward, the operation is to be judged by (a) the position of the uterus after a fair lapse of time; (b) the correction of disagreeable symptoms; (c) the improvement in the functions of the parts.

In all operations seeking the correction of these displacements the first step is to free the uterus and place it in the class of movable displacements. This accomplished, treatment of the coexistent tubal and ovarian disease is to be undertaken, and, finally, some means must be adopted to retain the replaced uterus in a position resembling the normal. But it will not suffice to assemble the organs in a relatively normal relation. All operations upon the displaced uterus must be performed with due regard to its function. Any operation which very generally interrupts a future pregnancy is to be condemned; and an anterior fixation may as surely prevent ascent of the pregnant uterus as will a posterior attachment. If this anterior attachment is low down an interrupted pregnancy is to be expected. This objection does not attach to fixation high up. The operations which proceed between the bladder and uterus, and end by attaching the uterus beneath the bladder, are very generally condemned. They all proceed from above the uterus where the adnexal lesions are approached, and are open to all the objections which attach to operations which provide no escape for the oozing produced by severing adhesions and conservative treatment of the adnexa. The same objection is found to hysterorrhaphy. But the operation through the belly is really attended by less traumatism than that incident to separating the bladder from the uterus, and has the advantage over the latter of facility in execution and freedom from bad influence over a subsequent pregnancy.

But not merely the question of the position of the uterus is involved in the discussion. If it were it is probable that the hysterorrhaphy of Kelly would be the operation of election in all cases. Certainly it is to be so considered where removal of either ovary or tube is rendered necessary because of pus. And in that word, *necessary*, we have the whole gist of the matter. All operations anterior to and above the uterus make no provision for the escape of fluids. As a result, it is found "necessary" to remove certain adnexal lesions which may be conservatively treated; oozing and serous discharge could be drained away. I refer to those more chronic ovarian and tubal lesions which are unaccompanied by the formation of pus. These are ovarian apoplexy, cystic ovaries, occluded tubes, adherent ovaries and

tubes, hydrosalpinx, and small broad-ligament cysts. To split open a diseased ovary, peel out the lining to the sac of a blood-clot, puncture cysts, trim the edges and suture, without making provision for the oozing which inevitably results, is to subject the patient to some risk when the operation is done through the belly. The same may be said regarding the treatment of hydrosalpinx and the formation by suture of a new mouth to the tube.

These lesions are undoubtedly brought about by pathogenic germs; and although no pus may be present at the time of operation, yet no one can insure the absence of germ life. It is undoubted that the conservative treatment through the belly of these various forms of tubal and ovarian disease is attended by rise in temperature and mortality. I do not think any forcible objection can be made to hysterorrhaphy, except that the removal of certain ovaries and tubes is found necessary, which removal would be unnecessary were the treatment by another route.

Almost any operation which invades the pelvic cavity can convert a fixed into a movable uterus. In that respect one has no advantage over another. Where incision of capsules containing fluid, the result of inflammation, is done, the escape of possibly infected fluid is necessary. This infection of the fluid is particularly likely in the case of occluded tubes. And in all such evacuating operations, whether performed upon the tube or ovary, the free and untrammelled escape of the discharge is of the utmost importance, not only to the individual as a whole, but also that the structure operated upon may exercise to its fullest its powers of repair. And if this evacuation be made in such a way that the parenchymatous oozing is removed immediately it is produced, as well as the fluid contents of the sac, it is apparent that hemostatic suture will not be necessary. Such a suture is unfortunate in all evacuating operations. It is strangulating to the tissues, thereby limiting repair, locks in discharges, and introduces a foreign material which must be taken care of.

If we can perform these evacuations without suture I believe the repair will be more thorough than when suture is used. To attempt this by any of the anterior operations would be to subject the patient to more danger than to remove the organs. Through the posterior cul-de-sac the pelvis is entered at its lowest point. When the incision is properly made and a certain posture of the patient secured, the operator can see as much as through the abdominal incision. Meeting a hydrosalpinx, an occluded thickened tube, cystic or apoplectic ovary, or small broad-ligament cyst, he is free to incise and trim the tissues as much as may be thought necessary, and to leave them oozing. Suturing is necessary only

when large portions of the ovary are removed, opening small, spouting vessels. Although all operations entering the pelvis are equally effective in severing adhesions, the posterior cul-de-sac operation, because of the position of the incision, enables the operator to apply conservatism in a class of cases and in a manner which he dare not attempt by any other operation.

The last question raised by me relates to the effectiveness of the various procedures in correcting the displacement and maintaining the uterus in a relatively normal position. There can be no doubt that the uterus is held upward and forward by hysterorrhaphy. I am willing to admit that the same is true of the intra-abdominal shortening and suture of the round ligament—the operations of Wylie and Dudley, and the intravaginal operation of Goffe. But I refuse to concede that the indications for treatment in adherent retroposition are met by the operation between the bladder and uterus, after Mackenrodt and Dührssen. These operations place the uterus forward, but also bind it down. Nothing can be said by me against them stronger than the statistics quoted by Edebohls. But having obtained such excellent results from another anterior operation, namely, hysterorrhaphy, the indication for the Mackenrodt or Dührssen or similar procedure scarcely exists apart from the more or less sentimental idea that a vaginal operation is done instead of an abdominal section.

Another operation, or rather, series of operations, is proposed for the relief of adherent, retroposed uteri. I have heard that by some the cul-de-sac is opened and the uterus freed, after which Alexander's operation is done. This unnecessarily elaborate combination would undoubtedly be admissible if Alexander's operation did not produce the frightful disability noticed as a sequel. There have been twenty-four inguinal hernias noted at the New York Hospital for Ruptured and Crippled, in the service of Drs. Bull and Coley. The hernias varied in size from a hen's egg to a cocoanut. With one exception they all occurred within one year, and sixteen within six months after the operation. Many were bilateral; they were produced by nearly every man who performs Alexander's operation in New York. I, myself, have reported twenty odd cases and showed photographs. Of course, there may have been duplicates in the two reports, but we are safe in saying that at least Drs. Bull and Coley have seen twenty-four cases. Can any other operation proposed for the relief of so slight a lesion as unattached retroversion show so many grave sequelæ? Then why introduce the element of hernia in the treatment of adherent cases? I fail to see the necessity for subjecting women with adherent uteri to the danger

of inguinal hernia. I am convinced that hysterorrhaphy is the preferable operation of all those which proceed from in front of the uterus.

The Operation through the Posterior Cul-de-sac.—

Up to January, 1897, I had operated fifty-one times. Up to May, 1895, I had operated six times. I have no means of knowing the result of this first work at the present time; but all the patients were well after three months and the uterus in good position, with one exception. I have to record one failure at three weeks in a gonorrhœic woman who removed the dressings so she could masturbate. Of the next series of twelve cases, two reported pregnant and were confined by my assistant, Dr. Torrens. Of the other thirty-three I have heard of one pregnancy.

Briefly described, the operation proceeds as follows: After thorough preparation of the vagina the uterus is curetted. Selecting the fold behind the cervix which marks the reflection of the vagina, I enter the cul-de-sac of Douglas. A careful digital exploration is made. The incision is then spread laterally until I can introduce the posterior retractor. The uterus is lifted up into the abdomen by the curved trowel, and several gauze pads are inserted into the pelvis. I then throw the patient into Trendelenburg's position, and am enabled to see and treat the adnexa as desired. Suffice it to say that I feel secure in incising large hydrosalpinx, cystic ovaries, subperitoneal cysts, bloodsacs in the ovaries, and in doing to these structures just so much suturing as they demand, but I try to avoid suturing for reasons stated. If I find a pus-focus in any structure I do not view the case as one of displacement, but as one of suppuration, a subject not under discussion.

I have not yet thought it necessary to remove any of the various results of tubal and ovarian inflammation, so commonly associated with retroversion, unless pus was present. I have operated while symptoms of gonorrhea were present and occluded tubes existed. I have removed small ovarian cystomata and replaced the adherent uterus. But I exclude all cases showing pus. After completing the operation I wipe the pelvis dry and introduce several folds of iodoform gauze just within the incision. These and the uterus are replaced *en masse*, the cervix being forced as high as the vagina will admit. I then lightly pack gauze around the cervix until that portion of the vagina which is above the levator ani muscle is almost filled. A stout roll of gauze is then made, varying in thickness and length to suit the width of the vagina. This is inserted transversely above the levator-ani fibers. It lies in front of the cervix, its ends resting in the lateral pelvic cavities.

By this the cervix is kept anchored and cannot descend. I sometimes pack the uterus with gauze. A stationary catheter is inserted and the sphincter ani dilated.

By the second day the bowels have moved, the bladder is irrigated, the catheter is withdrawn, and if intra-uterine packing has been used, it is removed. In from seven to ten days, varying with the amount of oozing produced by the operation, I place the patient in Sims' position and remove and renew the dressings under chloroform. The dressings are repeated until the cul-de-sac closes. The patient is out of bed in two and one-half weeks. I maintain the vaginal support for six weeks continuously, always employing the transverse pessary of gauze for this purpose. If amputation of the cervix and perineorrhaphy are indicated, they are performed in three months.

The operation, so far as I can find the results, succeeds perfectly. Several patients have reported pregnant, and two have been confined successfully. I seek by this operation to sever adhesions binding the uterus down. Next, those degrees of ovarian and tubal disease which, when the anterior operations are done, require removal of the organs, I treat conservatively. By replacing the uterus as I do, with the gauze behind the cervix, I seek obliteration of the cul-de-sac and the formation of a mass of plastic lymph between cervix, uterosacral ligaments, and rectum. As a result, the scar-tissue formed after healing is completed holds the cervix fixed upward. As the cervix cannot descend, the corpus uteri is thrown forward by the intra-abdominal pressure.

All those replacement operations which succeed obey one or two rules—either the corpus uteri is fastened high and forward, or else the cervix after replacement is fastened high and backward. The first fixes the body of the uterus, while my operation leaves it free.

The fear has been expressed that possibly hernia may occur through the scar. This is impossible, because the scar is thicker than the normal vagina, and is under the protection of the sacral promontory. That the operation succeeds is due to the formation of lymph effusion between the cervix, rectum, and uterosacral ligaments. The cervix being held high, and the corpus free, there is no tendency to abortion. The uterus is limited in its area of mobility in one direction only—downward movement of the cervix.

The after-treatment is undoubtedly troublesome, as is the treatment of all open wounds. It is also technical, and must be precisely carried out. To allow the cervix to descend and retroversion to oc-

cur before the post-cervical lymph has been converted into fibrous bands is to invite an ill result.

In December, 1896, I performed this operation upon a patient. One year afterward I opened the abdomen for appendicitis. I found the corpus uteri perfectly free. The direction of the bands suspending the cervix was as follows: One band, very broad, ran from deep in the cul-de-sac to a point two inches up on the rectum, measuring from the bottom of the cul-de-sac. Radiating from each side of the cul-de-sac were a number of slender bands extending to the uterosacral ligaments. The cul-de-sac was not obliterated, neither had the lymph been converted into a broad sheet. The ovaries and tubes were perfectly free.

Twice after doing this operation I have opened the belly at the same sitting; in one case, to inspect the appendix and to prove wrong the diagnosis of appendicitis, made by several surgeons; and again, to recover a lost gauze pad, the string of which had broken. In neither case could I see the gauze in the cul-de-sac, and the ovaries and tubes were entirely away from the gauze. Should the gauze be pushed high up behind the uterus the lymph forming around it would implicate the ovaries and tubes.

I elect one of two operations in all cases in which I operate for adherent retroposition. If there be occasion to remove the adnexa or a large tumor, I perform laparotomy and hysterorrhaphy. In all other cases I operate through the posterior vaginal fornix as I have described.

CLINICAL MEMORANDUM.

COLLOID DISEASE OF THE OMENTUM. CANCER OF THE LEG; AMPUTATION; RECOVERY.¹

By F. J. BOWEN, M.D.,
OF MT. MORRIS, N. Y.

CASE I.—A man about sixty-seven years of age presented himself to me with what appeared to be a hydrocele. The sac, however, was not translucent. I tapped, and drew off a dark, watery, "cancerous" looking fluid. Within a short time the scrotum was again distended, and a few days afterward the fluid could be seen distending the inguinal canals and reaching the abdominal cavity. In the course of a few weeks the abdomen became so distended that tapping was decided upon. A large-sized trocar was employed, but the accumulation would not flow; it was found to be thick and jelly-like, of a white, transparent color.

I suggested that some one else see the case. My medical friend very promptly made a diagnosis of ascites, and repeated the operation with the same result. The operation was repeated once afterward by a doctor sent to the

¹ Read before the Livingston County, N. Y., Medical Society.

patient by relatives without previously acquainting the patient with what he proposed doing.

The abdomen gradually became enormously distended, and the whole lower part of the body became infiltrated with this peculiar substance which oozed from the skin. Death occurred in the course of six or eight months from exhaustion. A post-mortem revealed two or three pailfuls of this peculiar material in the abdominal cavity. The intestines were pigmented. The omentum was a shriveled, thickened mass about the size and thickness of one's hand, and the fingers crumpled through it very readily. It reminded me of a slice of turnip, punched full of holes, thus forming the stroma, which yielded this colloid material. The diagnosis, of course, was colloid disease of the omentum.

CASE II.—The second case I report to show that a physician should never abandon what appears to be a hopeless case as long as there is a thing left for him to do; and also that it may assist one to decide as to the advisability of operation in a similar case.

A farmer, nearly sixty years of age, with no history of rheumatism, but of more or less hard work, began to have symptoms of heart failure. In the course of a year, when I was called again, I found his feet and ankles edematous. A very faint aortic regurgitant murmur could now be heard for the first time. A few days later it could be seen that the left ventricle was undergoing what I should consider rapid dilatation, the apex beat changing location perceptibly. He was put on tincture of digitalis and nux vomica, with nitroglycerin to be taken at the time of the sinking spells. The edema advanced in spite of treatment. At this time, feeling that something extraordinary should be done, he was given the "Da Costa" tablet, with the result that he was let down more rapidly than ever. He became partially comatose, so that for a week he hardly realized his condition or recognized members of his family.

Compression from the edema stopped the circulation in the feet. Punctures were made through the skin. He was again placed on digitalis and nux vomica, which, with compound jalap powder, gradually reduced the edema, the heart becoming stronger. Circulation returned to his right foot, but the left was damaged beyond repair. The gangrene extended to within about two inches of the knee. His general condition improved. His heart became able to run itself, which enabled him to take iron and a bottle of cod-liver oil. The gangrenous limb was kept packed in carbolyzed charcoal, awaiting the time when we could bury all of him together. Hot weather came on. The odor began to annoy the family, and one day he sent for me and asked my opinion of amputation. He was told frankly that he understood the condition of his heart. It was doubtful if he could survive an operation, but that he certainly could not live long without it. He replied that I could get ready and do it.

He was again placed on digitalis and nux vomica, and amputation above the knee decided upon for the third day after. Dr. Kneeland of Dalton was asked to attend to the most responsible part of the operation, the anes-

thetic. Ether was given. The heart showed the strengthening effects of the medicine, and pounded its way through without a skip. Dr. Brown of Nunda assisted at the operation. As near as practicable it was done aseptically. The silk was boiled, and every vessel was tied with it. No iodoform was used with the first dressing. The gauze had been sublimated, but afterward boiled, so that it was simply sterile. Following the operation he was given whisky, milk, and protonuclein. The wound healed very promptly, and the man is alive to-day, thirty months after the operation.

MEDICAL PROGRESS.

The Sudden Death of Young Infants.—BERTHOLD (*Centralbl. für Gynäkol.*, August 6, 1898) calls attention to the rapidity with which young infants sometimes die, although no cause is apparent. Sometimes at autopsy an enlarged thymus gland has been found, so that the writer believes such a gland to be the cause of death. According to his idea hypertrophy of the thymus may, unaided, cause death in young infants. In suitable cases, therefore, when the life of a child is threatened, a hypertrophic thymus may be removed in whole or in part.

Excesses in the Treatment of Infants.—NEUMANN (*Centralbl. für Gynäkol.*, August 6, 1898) refers to some of the injuries which may be inflicted upon very young infants by too much zeal in the care of them. In the first place, the bath may infect an otherwise sterile navel string. A rapid and complete mummification is the best protection against this accident, and the rule should, therefore, be to keep the navel dry after the child has been given its first bath. Another danger which often accompanies a bath is the too great cooling of the child's body. The careful cleansing of the mouth of the new-born child is unnecessary and often harmful, since it may result in infiltration of the mucous membrane, or even in ulceration. The snipping of the frenum of the child and the lancing of the gums are useless procedures, which are not entirely given up as yet. In case a healthy child is born the physician should be most careful not to depart from hygienic and dietetic rules. If a disease develops he should be ready to meet it in its beginning, hence the necessity of constant supervision of a new-born child.

The Position of the Transverse Colon.—COHAN (*Gaz. Heb. de Med. et de Chir.*, June 5, 1898) ridicules the idea that there is a single position for the transverse colon, which he says is the most movable part of the large intestine and may be found in any portion of the abdominal cavity. If the colon and its mesocolon are short, its position is usually transverse and rectilinear. If they are long it occupies a lower position in the abdomen, often reaching into the pelvis. In other conditions it may be drawn upward so as to occupy an unusually high position. Its right extremity is always situated lower than the left. Its great mobility causes it to lie in front of most of the abdominal organs. It may thus be a source of error in clinical examination of the abdomen.

THE MEDICAL NEWS.

A WEEKLY JOURNAL
OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed *exclusively* to THE MEDICAL NEWS will after publication be liberally paid for (accounts being rendered quarterly), or 250 reprints will be furnished in place of other remuneration. When necessary to elucidate the text, illustrations will be engraved from drawings or photographs furnished by the author. Manuscripts should be typewritten.

Address the Editor: J. RIDDLE GOFFE, M.D.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK.

Subscription Price, including postage in U. S. and Canada.

PER ANNUM IN ADVANCE	\$4.00
SINGLE COPIES10
WITH THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, PER ANNUM	7.50

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in *registered* letters.

LEA BROTHERS & CO.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK,
AND NOS. 706, 708 & 710 SANSON ST., PHILADELPHIA.

SATURDAY, OCTOBER 29, 1898.

THE PLAGUE IN VIENNA, AND THE REGULATION OF BACTERIOLOGIC INVESTIGATION OF EPIDEMIC DISEASE.

THE announcement of the death in the General Hospital at Vienna of one of the attendants in the bacteriologic laboratory of Professor Nothnagel's clinic supposedly from bubonic plague, looked at first as though it might be a newspaper canard, for now that Spanish war alarms are o'er, some of the papers find themselves sadly put to it to find the necessary matter, of a kind sufficiently sensational, to tickle the cloyed appetites of readers accustomed to be regaled at breakfast with a battle or two and a sea fight; and so not everything that finds its way to the composing-room is gospel truth. There comes, however, as we go to press, the confirmation of the first dread rumor and its sad substantiation by the report of the death, from the same disease, of Dr. Müller, Professor Nothnagel's assistant.

It is not at all likely that the disease will spread beyond those who have been in immediate contact with the infecting material. That there is very little cause for alarm may be judged from the fact that of all those (some twenty in number) sent by the various

governments of Europe to investigate the disease in India where it was raging severely at the time, but one, so far as we know, contracted the disease. He was a member of the German commission, who cut himself while performing an autopsy, and whose attack was very mild and ended in recovery. There is naturally not a little excitement among the people of Vienna, though Virchow and other distinguished medical men have sent their positive assurance that the disease, though infective, is *not* contagious, and there is no liability to an epidemic. In a few days the episode will have ceased to occupy public attention.

Another medical martyr is added to the list of those who have in recent years laid down their lives in the study of disease. The list is not a short one now. Not the least distinguished name on it will be that of the brilliant young medical man, some of whose work had already attracted attention, before the report of the Austrian plague commission brought him prominently before the medical world. The lesson of his death is an important one and should not be overlooked. It is that in handling virulent cultures of bacteria as in everything else, however fraught with danger it may be, familiarity breeds a contempt of danger that finally results in neglect of the proper precautions.

The purpose of study is a most commendable one; it deserves encouragement in every possible way. The detailed study of this very bacillus of the plague, attended as it has been always by the most serious danger, the danger being faced by hundreds of observers without a thought that they were heroes, has given the world a knowledge of the exact nature of the cause of the awful black plague so much dreaded heretofore, that will easily enable the profession to guard Europe from its ravages for all time. While we have insisted on the improbability of any epidemic of the disease attacking the city, there is no doubt that it is extremely imprudent, to say the least, to import the germs of foreign epidemic disease into the heart of crowded centers of population.

There is no necessity that such studies should be undertaken in large cities. So far no epidemic of disease has ever been started by carelessness in the handling of bacterial cultures. As the bacteria specifically causative of zymotic diseases become better known, however, and more and more

varieties of virulent cultures are kept for purposes of study, it is evident that the dangers of such an outbreak of disease from neglect of proper precautions will be always on the increase. One epidemic thus started might be enough by the popular feeling it would justly create, to hamper bacteriologic study for years.

It would seem, therefore, that now is the proper time to take precautions against such a deplorable possibility. An ounce of prevention is worth a pound of cure. A law, for instance, forbidding the bringing of cultures of any disease, not endemic to a city, into that city except under most stringent precautions would seem to be the remedy, for scientific enthusiasm will sometimes make even the most level-headed rash. A law making all experimental work with such cultures illegal, except in properly guarded laboratories and not situated in cities, would seem to be no more than the circumstances demand.

Of course there is the danger and there will surely be the protest on the part of bacteriologists that such regulations would hinder the progress of science. Perhaps, to some slight degree, it would at the present time, because research laboratories are unfortunately situated only in large cities; but a proper care for the public health seems to demand such regulation. We might have learned more of certain of the contagious diseases, smallpox for instance, if in recent times we had not quarantined so thoroughly the cases that occurred, but no medical man objects for this reason to the quarantine. Certainly even now anything like experimental study of the supposed bacillus of yellow fever conducted in the summer time especially in any of our large cities would be against the better judgment of the medical profession generally in such matters.

There is involved in this matter a grave weight of responsibility on the part of the medical profession toward the public health. Nothing of a serious nature has yet occurred, but it behooves us to preclude the possibility of anything occurring. The fair name of modern scientific medicine is too precious to permit of its being smirched by the blot of an epidemic of disease introduced into a closely packed population because of defective precautions during the study or demonstration of its bacterial cause. The matter is, in its way at least, as important as the manufacture of high-grade explosives.

No amount of care or knowledge of the personal danger involved will ever quite protect men from becoming habituated to the risk involved and being tempted to some indiscretion whose consequences may be far-reaching. Measures should therefore be taken at once, the initiative coming from the medical profession itself, for the legal regulation of such study, lest some sad mistake should precipitate an outburst of popular feeling that would seriously hamper the progress of scientific medicine.

CHRISTIAN SCIENCE AND NIHILISTIC THERAPEUTICS.

THE cable last week brought us the sad news of the death of a well-known American literary man in England at the untimely age of forty-two. It brought us also the news that he had been tended in his last illness, at his own request, by a Christian scientist, and that an investigation into the cause of his death had to be legally made before a burial permit was issued. Harold Frederic was not the first, by any means, among the intelligent class of the community who took up with the latest fad, Christian science. His state of mind is by no means a rare one even among people of his class. It would seem worth the while then to stop a moment and ask ourselves why it is so; and then the natural and very practical question, Is there anything in the attitude of the modern physician toward his art that is an occasion for it? It is very easy to say that the sect or school (which shall we call it?) is neither Christian nor scientific; that no Christian sect would admit any kinship with them, and no scientist allow for a moment any claim of theirs to be permitted to hang, however precariously, on the skirts of science. To sum the whole thing up as an imposture, brought into prominence because it is the fad of the moment, and then put the matter aside as if that were all about it, is one way of disposing of the question but not a very satisfactory way.

The fact is that this is an age of unrest and of unsettled opinions. The old faiths are losing their hold on many minds and among the others the faith in the physician. There is a reason for this want of medical faith just now more than before, because practical medicine is in a transition stage. At least it comes to the lay mind that this transition is taking place just now, though it has been insensibly

in progress for a good while. The abandonment by medical men of the old doctrine of specifics for disease is just being realized by the non-medical. In the midst of the mental state of hesitation in medical matters induced by the realization of this change of base, the time spirit of heresy, for the Greek root *alpeōis* means free choice, has gathered worshipers before some odd medical shrines. This is essentially the age of quacks and charlatans, of faith cure and mind cure, of water cure and air cure, of drug cure and diet cure, while the regular practitioner no longer claims to cure at all, but only to help Nature in her effort to restore the equilibrium of organic economy.

Meantime physicians themselves have been not a little to blame for the present condition of therapeutic incredulity in the popular mind. With the gain in our knowledge of pathology that followed the great work of Rokitansky and the Vienna school, there came a wave of nihilistic therapeutics over scientific medicine. To the pathologist, who could point out on the autopsy-table the absolutely irreparable destruction of tissue in kidney and liver and intestine and heart and lungs, it seemed absurd to give medicines for organic disease, and so it was and is, if there is included in its exhibition any hope of curing the organism by the repair of organic changes. But there is another side to the question.

Humboldt when comparatively young is said to have remarked that he would not care to be responsible for the invention of an optical instrument so faulty as is the human eye. Later on in life, he expressed his admiration for it in no measured terms, as an optical instrument that had within itself wonderful powers of compensation. The human body is such an instrument. It has within itself almost untold powers of compensating for even organic changes that have taken place.

Symptomatic treatment, though the term has been the subject of no little derisive aspersion, is the fulfilment of the mission of therapeutics to aid Nature in her compensatory effort, for symptoms are but the signs of failing compensation, the guides as to when and where and how we may be of assistance to Nature in her struggle with disease. Treatment is no longer the direct battle that it was for so long thought to be with the *ens morbi* itself, but it has thereby lost nothing of its dignity as the practical

expression of what medicine can do for the patient. The young man straight from his books and his autopsies and his microscope and his bacteria may think little of symptomatic treatment because it smacks of empiricism and has none of the direct demonstrative effect that strict science demands, but the old clinician after long years in the actual study of cases, after long experience in the treatment of disease, and withal a knowledge of pathology that may be thoroughly up to date, *knows* how much good his remedies have done and honors them accordingly.

There has been too much expression given, and by those least justified in giving it, to a lack of faith in remedial measures. Under the influence of the feeling of disrespect for what is called mere symptomatic treatment, by certain misguided, mostly young medical men, the good that may be done for symptoms is, as one of our distinguished old clinicians has recently said, left undone until symptoms have gotten beyond control; while if they had been conscientiously recognized and treated from the beginning much good might have been accomplished. The practice of medicine is an art, not a science, and is likely to continue so for many years yet to come. It is bound to have in it those elements of the personal that make the practise of any art unsatisfactory to its devotees, because they fail so notably to reach their ideals, and recognize that fact. This spirit of dissatisfaction is in itself, however, a blessed privilege, for it is the surest earnest of renewed and continued effort, the best mark that the art is ascendant, not on the wane.

It is a matter of serious importance, however, that this spirit of dissatisfaction at a period of transition in medical beliefs, such as exists at present, should not be communicated to those who are unable to realize its significance, nor gage its promise for future progress, but who simply translate it into terms of failure of the ordinary therapeutic methods so long accredited. As said, the members of the profession most liable to convey such impressions, while calculated by their scientific attainments to win credence and acceptance for statements of theirs, are, as a rule, just the ones whose relations to the practical treatment of disease have least fitted them for the expression of therapeutic or atherapeutic opinions. It is much easier to be a nihilist in therapeutics, as in most other things, than to be the inventor of use-

ful curative procedures. But the world will honor not the men, who gave up because the system was imperfect and wished to wait inactively for the future to reveal better methods, but those who manfully set their hands to the work, and though with imperfect tools, accomplished to the best of their ability the work their hands found to do—struggling through darkness to the light—*per aspera ad astra*.

TYPHOID FEVER IN THE FRENCH ARMY.

WE have learned that typhoid stools when mixed with drinking-water will multiply the number of cases of typhoid fever in a camp. This simple lesson had already been learned by many communities in civil life, recently at Maidstone for instance, but it was reserved for Camp Thomas to teach it to the army officers. There was served daily at this camp the diet which the Assyrian monarch prescribed, and the results show what a meaning curse it was that his cup-bearer, Rab-shakeh, hurled into the face of the King of Israel. They learned the same lesson in the French army a good many years ago. Perhaps it may be interesting to see how they profited by their experience.

In 1895 the Eleventh Army Corps of the French army numbered about 11,000 men, of whom some 600 had typhoid fever every year. Something less than 100 of these patients died. Since 1886 the mortality has never reached 30; while in 1896 there were only 8 deaths, and in 1897 only 7 from this cause in this large body of men. The officers have been learning their lesson, and as a result, the number of cases of typhoid fever which developed annually in this portion of the army has been divided by 24, and the mortality from typhoid by 25.

It was not by reason of natural surroundings that the present favorable figures have been obtained. The Eleventh Corps is stationed in one of the worst districts of France, a region of which it has been said, "Tuberculosis kills the inhabitants, and typhoid fever keeps the doctors alive." Most of the villages are in an unsanitary condition. Leaky privy-vaults and open ditches containing fecal matter contaminate the subsoil, while in the absence of running water, well water is used for drinking and cooking. The municipal councils are for the most part innocent of any knowledge of hygienic laws, and public disinfection, isolated treatment of infectious disease,

or even official notification of the same are usually neglected. Nevertheless in such unfavorable surroundings the sanitary corps of the army has been able little by little to introduce measures which have raised the standard of health in that district, until its soldiers show the very best record of the whole army. These sanitary measures are briefly: Continuous ventilation of the sleeping apartments; frequent whitewashing of the walls; rendering the floors impervious by coal-tar; removal of dust in a moist condition; introduction of hand-basins and shower-baths; increased rations in the field, and a greater variety of food; substitution of tight movable water-closets for the old privies and ditches.

In spite of these changes, typhoid fever continued its ravages, especially in certain garrisons, although in lessened degree. Well water was still in almost universal use.

In 1889 most of the wells were condemned and, wherever possible, spring water was conveyed to the garrisons. Where this was not practicable Pasteur-Chamberland filters were provided. As a result of these measures the number of cases of typhoid fever fell below 10 per cent. per year for the first time in the history of this army corps, while the deaths fell below 20. As long as the region in which it is situated is so completely infected with typhoid as it still is, it will be impossible to stamp the disease out of the army entirely; for no matter how carefully the water-supply of the garrison is guarded, one cannot prevent a soldier from drinking outside of the barracks.

If typhoid fever breaks out or is suspected, the clothing and bed-clothing of the sick soldier are sterilized by steam under pressure at 115° C. (239° F.), and the walls and floor of his apartment are disinfected by powders or by solutions.

Is there anything for America to learn from this account of France's experience as given in the *Gazette Medicale de Nantes*? Could any words be more suitable to the occasion than those with which the writer closes? "Nowhere is there a plainer triumph of prophylaxis, based upon a knowledge of the general causes of disease, than in our land army, . . . thanks to the ingenuity, vigilance, and energy of the *eminent technical chiefs*, to whom the sanitary direction of affairs has been so happily confided. It is also necessary to recognize that success is in part

due to the solicitude and authority of the commander, who has exacted obedience to these preventive measures." "*Eminent technical chiefs!*" And commanders who command!

ECHOES AND NEWS.

Mules in Cuba.—The mules sent from the United States to Cuba seem to thrive well there, as only twenty-two have died out of the 1200 sent.

The Wyoming State Medical Society.—The second regular meeting of this youthful organization will be held at the Wyoming General Hospital, Rock Springs, Wyoming, Tuesday, November 1, 1898. A unique number on the program is the report of a case of "foxtail infection."

An Antivivisectionist and Professor Virchow.—During the course of the complimentary dinner tendered Professor Virchow upon his recent visit to London an anonymous telegram was handed to the guest of the evening containing the following words: "Get thee hence, vile vivisector! England spurns thee!"

Poisoned by Toadstools.—Three deaths occurred recently in Trenton, N. J., from eating toadstools supposed to be mushrooms. Five other members of the same family are seriously ill from the same cause, but are expected to recover. The distinction between mushrooms and toadstools often quoted in the country districts is apropos: "Eat them; if they kill you, you will know they are toadstools; if you live, they are mushrooms."

A Spanish Military Academy of Health.—It appears that Spain has at last learned something from her Cuban experience. For the better education of surgeons about to enter the Spanish army a Military Academy of Health has been established at Madrid. Especial attention will be paid to the study of the pathology of tropical climates, the organization of the Spanish and foreign armies in matters of health, regulations, and services, sanitary material, and ambulance tactics.

Death from Stramonium.—The seeds of the *datura stramonium* recently claimed their annual victim in Newark, N. J., in the person of a five-year-old child. It is said that there has been in that city at least one death from this cause every year for the past twenty-five years. The practice prevailing in many of our large cities, as well as in the smaller ones, of allowing vacant lots to produce year after year crops of noxious and poisonous weeds cannot be too strongly condemned. It was by seeds procured from such sources that the recorded fatality was effected.

Longevity in Europe.—From statistics compiled from the mortality bills of the principal European countries from 1881 to 1890 inclusive, the average life in Norway and Sweden is found to be 50 years; England, 45 years and 3 months; Belgium, 44 years and 11 months; Switzerland, 44 years and 4 months; France, 43 years and 6 months;

Austria, 39 years and 8 months; Prussia and Italy, 39 years; Bavaria, 36 years, and Spain 32 years and 4 months. From this it would appear that longevity varies directly as the latitude and inversely as the mean temperature.

Army Contract Surgeons to Be Examined.—An order has been issued by the War Department directing the Surgeon-General to convene a board of medical officers to examine acting assistant-surgeons now in the service and candidates for appointment. Up to the present time appointments have been made by the Surgeon-General on professional and such other indorsements as the candidates have been able to present. This course was necessary because of the urgent necessities of the service, and the fact that medical officers were not available for duty on the examining boards.

Injured While Experimenting with Liquefied Air.—While experimenting with liquefied air at the Brooklyn Polytechnic Institute last week, Professor Irving W. Fay of the Chemistry Department was seriously injured about the face, and will probably lose the sight of one eye. He had mixed with it some red phosphorus, and poured out the mass upon a piece of paper on the table, and was watching the changes take place in the phosphorus. He then took up a glass rod and separated the particles, when the explosion occurred which produced the injury. Fortunately, the force of the explosion was exerted downward, wrecking the table.

Contagion in a Public School.—There has been an epidemic of diphtheria recently among the public-school children of Scranton, Pa. The parents of one child who contracted the disease have brought suit for damages to the amount of \$25,000 against the school authorities and the contractor who was renovating the plumbing of the school, alleging that the disease was due to sewer-gas poisoning. The plaintiffs will undoubtedly encounter no little difficulty in establishing their claim that the disease was due to sewer-gas poisoning. Indeed, some of the best authorities assert that diphtheria cannot be contracted in that way.

The Troops in Cuba.—Brigadier-General Lawton, who arrived last week on the transport "Michigan," is credited with the following statement: "The American troops, both regulars and volunteers, are very discontented in Cuba, and want to return home. In my mind, the time will never come when the American soldier will serve in Cuba contentedly." He does not like the country and he does not care much for the people. About twenty per cent. of the troops are sick, but this is not due to their not being acclimated, for the same percentage of sickness prevails among the inhabitants. The immunes have not escaped, as was expected, for many of them are sick.

Physicians Honored.—Sir William MacCormac, Bart., and Sir Francis Laking have been appointed Knights Commander of the Royal Victorian Order. Mr. A. D. Fripp and Fleet-Surgeon A. G. Dalmeago have been appointed members of the fourth class of this order.

These physicians were medical advisers to the Prince of Wales in his recent illness. The Royal Victorian order is bestowed upon "such persons, being subjects of the British Crown, as may have rendered extraordinary, important, or personal service to Her Majesty, her heirs, and successors, and who have merited Her Majesty's royal favor." Only two other physicians are members of this order.

Yellow Fever in the United States.—The recent epidemic of yellow fever was confined almost exclusively to the two States, Louisiana and Mississippi. The total number of cases recorded by the Marine Hospital Service up to October 22nd was 2571 with 141 deaths, a mortality of 5½ per cent. The recent cold weather, which has fortunately prevailed in the Southern Mississippi Valley, has stayed the epidemic, allayed the fears of the panic-stricken inhabitants and raised the exacting quarantine. From this time on it is to be expected that State officials may be found at their posts of duty and the importunate taxpayer may find the proper officer to receive his obligations of citizenship.

Sickness at Manila.—The report of October 23d showed 1801 cases of sickness from all causes among the troops stationed at Manila. Many of the cases are only temporary, and but comparatively few cases of serious illness are reported. There have been a few cases of smallpox. Three deaths from typhoid occurred during last week, and eleven deaths from other causes. One of the most serious difficulties with which the surgeons have to contend is the drunkenness among the soldiers. Manila is full of saloons, and more are preparing to open, so that the outlook in this direction is anything but favorable. Medical supplies have been purchased at Yokohama, and work on the new hospital is proceeding rapidly.

The Annual Meeting of the New York County Medical Society.—The annual meeting of this Society was held at the Academy of Medicine, Monday evening, October 24th. The principal business of the meeting was the election of officers for the ensuing year. The members were divided into two factions, one composed of those who had been active in securing legislation looking to the reform of dispensary abuses, and their friends, and the other faction composed of those conservative members who are disposed to let dispensary and hospital matters regulate themselves. The result was a complete triumph for the latter element. The following officers were elected: President, S. O. Van der Poel; first vice-president, Henry C. Coe; second vice-president, J. Clifton Edgar; secretary, Wm. E. Bullard; treasurer, John S. Warren, the latter being the only candidate elected on the opposition ticket.

Workings of the New Vaccination Act in England.—As a sample of the "conscientious objection" to vaccination the following case is cited: At the Cardiff police court, on September 24th, a young man was granted an exemption certificate on the ground of conscientious objection to the vaccination of his child. One of the magistrates, a physician, took the opportunity to remark that

they as magistrates had "conscientious objections" to granting such certificates. He added that the magistrates had a conscientious belief that the law permitted an act of gross injustice to the child, and they regarded the conscience clause as a great farce which would one day end in a tragedy. At another place exemption certificates were issued by two courts to 660 persons for about 1670 children in two hours and a half, at the fee of two shillings a case. The objectors were brought into the court in batches of ten to twenty, and asked whether they had any conscientious objections. Some replied verbally, but many considered a nod of the head as sufficient evidence of their scruples.

Dr. Koch's Recent Visit to Rome.—After a stay at Rome of more than a month, engaged in malarial researches, Dr. Koch has returned to Berlin. He was accompanied by his associates, Drs. Pfeiffer and Kossel. One of the objects he had in view in visiting Rome was to ascertain how far the Italian malaria coincides with the tropical form of the same malady, and he has satisfied himself that in all essentials they are identical. He has also been able to indicate properties hitherto unnoticed in the pathogenic germ of malaria as found external to man—properties possessing a distinct prophylactic value toward limiting the diffusion of the malady if not in arresting it at its point of origin. He has, however, to supplement this part of his researches by others on the same lines, and with this object he intends to return to Italy in the spring of 1899. So far he has found nothing to add on the clinical side of the subject; and the Roman school do not disguise their satisfaction at this frank testimony to the practical worth of their painstaking contributions to treatment. They, in turn, are profuse in their acknowledgments of Professor Koch's scientific elucidation of points hitherto left obscure, and are grateful for the impulse he has given to the investigation of problems the solution of which seems now "within measurable distance."

The Plague in India.—According to the latest reports there is a slight increase in both the total mortality and death-rate from the plague. During the two years which have elapsed since its appearance the plague has claimed more than 100,000 victims, and as yet no satisfactory method of treatment has been devised. The inoculation experiments have not met with the success anticipated, and owing to native prejudice cannot be fully carried out. It is claimed that the use of antitoxic serum has been successful in 47 per cent. of the cases treated, but this is a very small percentage for, as in smallpox, a certain number recover with little or no treatment. Of those treated in hospitals, 50 per cent. die within forty-eight hours, and of those who live over three days 50 per cent. recover. From observations carried on since the outbreak two years ago, and from the history of previous epidemics, its spread is found to be slow and the area of invasion small, it being still confined almost entirely to the Bombay Presidency. Owing to the hardships entailed by the former quarantine regulations and to the fact that the plague is likely to persist for several years, these regulations have been modified. A strict medical examination

with disinfection has been established at suitable centers, and the old system of passes abolished. Persons coming from infected regions are kept under surveillance for ten days. But these regulations it is hoped will confine the disease within its present bounds by limiting travel to healthy persons.—*Lancet*.

CORRESPONDENCE.

PROFESSOR VIRCHOW'S LECTURE.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—Concerning the address of Virchow which you editorially review in your issue of October 22nd, will you kindly inform the readers of the NEWS in what journals the address has been published?

Truly yours,

GEO. M. GOULD, M.D.

PHILADELPHIA, October 22, 1898.

[We are glad of this opportunity to inform the readers of the MEDICAL NEWS that the editorial review referred to was based upon the original, authentic address as published in the *British Medical Journal*. We are also pleased to call attention to the commendable journalistic enterprise of our esteemed contemporary, the *Philadelphia Medical Journal*, which published the lecture in full, simultaneously with the *British Medical Journal*. The lecture has also appeared in the *New York Sun*.—ED.]

THE FEVER AT HATTIESBURG, MISS.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—The fever we have at Hattiesburg has been declared to be yellow fever, but why I cannot see. It may be it was so declared because of its apparent strangeness, but, nevertheless, I do not believe it to be real yellow fever. Neither do I accept "yellowoid," the new name given by Dr. Souchon of New Orleans to the fever, as a suitable one for the fever here. Yellowoid is an indefinite word and, therefore, we do not know definitely what Dr. Souchon means when he says a disease is "yellowoid." Yellowoid literally means yellow-like, and therefore we might say it is like gold, yellow corn, or anything else that is yellow. If yellow fever was called "yellow" simply, then we might conclude that the doctor means like yellow fever when he says it is yellowoid, but unfortunately for him, yellow fever is called yellow fever.

It is true that jaundice is called "yellows," and, therefore, with some propriety, he might call any disease that resembles, or is like yellows, yellowoid, but unfortunately for him again all who have the fever do not turn yellow, and then again, a person may have the "yellows" without having any fever at all. So "yellowoid" is not the name for our fever.

There is another peculiarity about this fever; it is not contagious, but persons in the same locality where others have it are liable to it too if they are not careful about their health, whether they come in contact with the sufferer or not. This satisfies me that it is atmospheric; that is, it is taken from the air; there are conditions in the

air that produce it in one who is not careful in preserving his health. So the yearly alarm we are having is due principally to unskilled boards of health and experts.

ISAAC L. PEEBLES, M.D.

HATTIESBURG, MISS., October 18, 1898.

MEDICAL MATTERS IN CINCINNATI.

[From a Special Correspondent.]

CINCINNATI, October 22, 1898.

At the regular meeting of the Academy of Medicine, on October 10th, Dr. H. J. Whitacre presented a paper, entitled "A Pathological Basis for the Treatment of Bright's Disease," which was illustrated by the projection-microscope and lantern slides. Delafield's classification of kidney diseases was explained, and each lesion profusely illustrated by photomicrographs and sections. About fifty illustrations were used, and among them pictures of Richard Bright and Malpighius, taken from rare old steel engravings. The paper was discussed by Drs. Rowe, Bettman, and Kiely. Dr. Bettman defended the old classification into an acute and chronic parenchymatous nephritis and an interstitial nephritis; Dr. Rowe made some interesting remarks on the histology of the kidney, and Dr. Kiely spoke briefly on Bright's disease as a constitutional affection in which a lesion of the kidney might be present or absent.

At the meeting of October 17th, Dr. Robert Sattler presented a paper, entitled "Recent Advances in Ophthalmology of Interest to the General Practitioner." The operative treatment of myopia and the use of a two-percent. solution of nitrate of silver in ophthalmia neonatorum were the points of main interest. Dr. Christian discussed the paper at length, and aptly referred to the myopic individual as one of the worst types of a cripple. That part of the paper referring to ophthalmia neonatorum was further discussed by Drs. Caldwell, Schwab, Brown, and Thompson.

The Cincinnati Research Society held its first meeting of the year on Thursday, October 13th, in the laboratory of the Cincinnati College of Medicine and Surgery. Dr. Greiwe presented a series of sections showing syphilitic disease of the spinal cord. The sections were taken from a single case in which were present the lesions of a syphilitic meningitis, gummata of the cord and meninges, and softening of the cord in both the grey area and around the central canal. The sections were stained by the Weigert and Pal methods. This organization of a limited number of the scientific workers of Cincinnati did excellent work during the last season, and renewed interest is demonstrated by its members.

Dr. James T. Whittaker selected as the subject of a college lecture last week a very unusual epidemic of smallpox, occurring near Lima, Ohio, to which he had been called in consultation. The epidemic was unusual in the fact that the diagnosis was difficult, and most of the cases had been called chicken-pox and measles by a majority of the local practitioners. None of these patients had been vaccinated, and the epidemic illustrated the necessity of wholesale vaccination in the presence of a

mere suspicion of smallpox. Such precaution had not been taken in this community.

The Board of Managers of the Presbyterian Hospital has issued invitations to the opening of the new McDonald Hospital Building on November 1st.

The Miami Valley Medical Society will hold its forty-second semi-annual meeting at Loveland, Ohio, on Tuesday, November 1st. The Cincinnati physicians appearing on the program are Drs. J. C. Oliver, T. V. Fitzpatrick, C. A. L. Reed, Philip Zenner, F. W. Langdon, and C. M. Paul.

The enrolment at the Ohio and at the Miami Medical College is about the same as last year. That of the former is 205, and of the latter 98.

The vital-statistics report of the Board of Health for September shows the total number of deaths to be 412. Among the infectious and contagious diseases reported were: Measles, 6; diphtheria, 33; scarlet fever, 12; typhoid fever, 37; phthisis pulmonalis, 38; variola, 2.

OUR PHILADELPHIA LETTER.

[From Our Special Correspondent.]

NOMINATION OF OFFICERS AND PLANS FOR THE SEMICENTENNIAL ANNIVERSARY CELEBRATION OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY—ELECTION OF OFFICERS OF THE PATHOLOGICAL SOCIETY—HOSPITAL NOTES—THE ELWYN INSTITUTION—OBITUARY—PERSONAL NOTES—A NOTED VISITOR—BOARD OF HEALTH NOTES AND HEALTH STATISTICS.

PHILADELPHIA, October 26, 1898.

At a meeting of the Philadelphia County Medical Society held October 19th, the following officers were nominated and having no opposition will doubtless be elected at the next meeting: President, Dr. S. Solis-Cohen; first vice-president, Dr. John H. Musser; second vice-president, Dr. Shoemaker; secretary, Dr. John Lindsay; assistant secretary, Dr. Kirby; treasurer, Dr. Collier L. Bower; censor, Dr. Ash. Drs. Kirby, Bower, and Lindsay are nominated to succeed themselves.

The report of the Committee of Arrangements for the celebration of the semicentennial anniversary was read by Dr. William M. Welch, the chairman. On Saturday evening, January 14th, Dr. J. Chalmers DaCosta will deliver the oration at the College of Physicians, Sunday the 15th, Dr. K. B. Tupper will preach a sermon at the close of which a collection will be taken for the benefit of the Mutual Aid Society, and on Monday the Society will give a dinner at Horticultural Hall to which many prominent men will be invited. As the membership of the Society is now over 700, an unusually large attendance is expected.

Dr. Hughes, president of the Pathological Society, delivered the annual address October 13th. He reviewed the work of the year and complimented the Society upon its success, over one hundred communications with specimens having been presented during the past year. The following officers were elected: President, Dr. W. E. Hughes; vice-presidents, Drs. John Guiteras, F. A. Packard, Alfred

Stengel, and Charles W. Burr; secretary, Dr. David Riesman; treasurer, Dr. Thompson S. Westcott; recorder, Dr. D. A. Taylor.

The Philadelphia Red-Cross Society has about completed the necessary alterations to its building at Twentieth and Cherry streets, which is to be opened as a hospital under the direction of Dr. C. P. Franklin, Dr. J. W. O'Neill, W. C. Allison, and a committee of women.

Negotiations were completed last week by which the Samaritan Hospital becomes the possessor of the dwelling next to it, 50 x 230 feet, which is to be added to the hospital as soon as alterations can be made.

The report of the treasurer of the Pennsylvania Training School for Feeble-minded Children at Elwyn shows expenditures of nearly \$25,000 during the past year for new buildings and property. There are 890 patients in the institution at present, with room for over one hundred more of the "improvable" class.

Dr. Henry Landis died suddenly at his home in Reading, October 18th. He was formerly President of the Berks County Medical Society, and for many years on the staff of St. Joseph's Hospital.

Dr. Samuel Creadick, a graduate of the University of Pennsylvania, died last week, aged fifty-one. During the municipal campaign of 1896, although he had never before entered politics, the Republicans nominated him for common council to which office he was elected by a large majority.

William S. Leffman, Clerk to the Faculty of the Polyclinic, died October 13th. For a long period of years Mr. Leffman was Clerk at Jefferson Medical College, and many will hear of his death with great regret.

Major Joseph K. Weaver of Norristown succeeds Major Charles Jackson as Surgeon-in-Chief at the Second Division Hospital.

Dr. W. R. Nicholson, Jr., has been elected a member of the staff of the Maternity Hospital to fill the vacancy caused by the death of Major Lawrence S. Smith.

Dr. Clifford Allbutt, Regius Professor of Physic at Cambridge University, recently stopped in Philadelphia, on his way home from California and the East, long enough to deliver two very interesting lectures, the first, "The Pathology of the Circulatory System," at the University of Pennsylvania at the request of Drs. Tyson and Musser; the second, "The Therapeutics of the Circulatory System," at Jefferson Medical College, where he was introduced by Dr. S. Weir Mitchell, who in turn was introduced by Dr. H. A. Hare.

A resolution from the Board of Education was read at the last meeting of the Board of Health complaining that a large percentage of non-vaccinated children are admitted to the schools upon certificates signed without proper evidence. It was resolved to ask the Board of Education for specific cases where the law has been violated so that action may be taken as the law in this respect is very strict.

The total number of deaths occurring in Philadelphia, as reported at the Health Office for the week ending October 22nd, was 389, of which 122 were in children under 5 years of age. The total number of new cases of contagious disease for the week was 218, as follows:

Diphtheria, 104 cases, with 26 deaths; scarlet fever, 20 cases, with 4 deaths; typhoid fever, 94 cases, with 17 deaths.

TRANSACTIONS OF FOREIGN SOCIETIES.

Paris.

PHYSIOLOGICAL EDUCATION OF THE CHARACTER—MARSEILLES AS A SMALLPOX CENTER—TRANSPLANTATION OF LIVING BONE AS A SUPPORT FOR A DEPRESSED NOSE—PERIRECTAL ACTINOMYCOSIS—A CUTANEOUS PYOGENIC INFECTION.

At the Academy of Medicine, September 6th, FERRAND read an article on the "Physiological Education of the Character." He took the position that the character is no more than the *mode of action*, and showed that for the development of the character it is only necessary to excite action in the first place, and then so to organize it that the inferior centers of nervous activity shall remain subordinated to the superior centers until the natural control of these higher centers shall have an opportunity to become firmly established. The speaker added that it is necessary that the inhibitory action of the superior centers over the inferior ones should be an absolute authority, while over them all as a sovereign master should be the intelligent and free will.

LANDOUZY spoke of the importance of Marseilles as a center for the spread of smallpox. No longer ago than 1886 there were registered there 2400 deaths from this cause. He advocated the isolation of those persons attacked with smallpox, the disinfection of everything contaminated by them, and the vaccination or revaccination of everybody who could be suspected of having had communication with the invalid.

At the session of September 13th, BERGER discussed the "Transplantation of Living Bones." Ricard recently reported a case of a young woman into whose back he had grafted a portion of the coccygeal bone of a dog in order to make good the loss occasioned by the removal of a sarcoma. The bone attached itself and was not absorbed, as was proved by palpation five years later. At that time the sarcoma had become general throughout the body, although there was no local recurrence. The experiences of Ollier, Adamkiewicz, and Mosse have shown that such heteroplastic bone grafts are almost always absorbed in whole or in part, but that a fibrous tissue takes their place, so that the desired effect is more or less accomplished after all. The subject is one suited for study with the Röntgen-rays, so that more evidence may be expected upon it. Ricard also reported the case of a woman in whom he had placed a metallic support for a saddle nose. The support caused ulceration of the skin, and had to be removed. The operator then divided the skin in the median line, separating it carefully from the underlying tissues for a considerable distance, and closed it over the fourth metatarsal bone of the patient, which had been removed for that purpose, and suitably shaped. The esthetic result was satisfactory, and the graft maintained its vitality. Nevertheless, in the course of time it lost its bony character, being replaced by a dense fibrous

mass, which was sufficiently resisting to prevent the nose from sinking into its former position.

Berger said that metallic supports have been given up by most surgeons on account of their tendency to cause necrosis of the skin. The success obtained by Ricard was gratifying, but by no means a perfect cure since the nose was still short and more or less flattened. Israel had also obtained good results in bone transplantation for this deformity, but after a shorter or longer time the bones were partly or wholly absorbed, with the result that the flattening of the nose was in part reproduced. He agreed with Ricard that autoplasmic osseous grafts are no better for this purpose than the bones of an animal.

PONCET narrated the case of a man aged fifty-eight years who had suffered for twenty years from a perineal suppuration complicated by vegetations and ischiofemoral indurations, contraction of the sphincter ani, enlargement of the inguinal glands of the right side, etc. For three months he had had pain on micturition, and had passed bloody urine. He admitted when questioned that he had passed a head of wheat into his bladder about a month before the symptoms referable to that organ made their appearance. By means of a lithotrite a hundred fragments of calculus were extracted. The examination of the pus about the anus showed it to contain grains of actinomycetes with the central mycelium. The classical treatment by iodid of potash, 4 grams daily, was begun and continued some days without much benefit. A linear proctotomy was, therefore, performed, and from this operation the patient obtained considerable relief in the passage of fecal matter. The granulations were curetted away as far as possible and cauterized. The repair of these lesions went on with great slowness. No more calculi were found in the bladder, but the prostatic urethra still contained phosphatic material. In short, it appeared that the perirectal and perivesical infections had not disappeared, although actinomycotic grains could no longer be found in feces or in the urine.

At the Session of October 4th, HALLOPEAU spoke of a "Cutaneous Pyogenic Infection" (*impetigo herpetiforme d'Hebra*). He had recently observed three such cases. The trouble is confined to the skin, and is marked by multiple suppurations of a superficial character, which progressing eccentrically may involve large surfaces of the skin and constantly recur when once healed. They are accompanied by a febrile reaction, which in some patients is intense. The first lesion noticed is a small blister surrounded by an erythematous border. These blisters are multiplied on the margin at the same time that a crust develops in the center. After the removal of the crust a rough and often bleeding surface remains. The lesions are frequently confluent. If the trouble is found upon the limbs it is usually bilateral. The knees are a favorite seat on account of the folds of skin. Besides the skin the mucous membrane of the cheek may become involved, as may also the vagina. The disease may last for months and often terminates in death. It is impossible to say if it is due to the action of modified staphylococci or to some as yet unknown pyogenic microbe. This pyogenic cutaneous infection is distin-

guished from the common pyogenic infection by the absence of infarcts in the viscera, by its duration, which may be very long, and by the possibility of a recovery from it.

SOCIETY PROCEEDINGS.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

*Abstract of the Proceedings of the Twenty-fourth Annual Meeting, Held at Nashville, Tenn.,
October 11, 12, 13, and 14, 1898.*

(Continued from page 544.)

SECOND DAY—MORNING SESSION.

DR. THOMAS CHARLES MARTIN of Cleveland, Ohio, read a paper, entitled

COMPLETE INSPECTION OF THE RECTUM BY MEANS OF NEWER MECHANICAL CONTRIVANCES.

The newer mechanical means exhibited consisted of a set of proctoscopes which are provided with obturators of peculiar form, of an illumination apparatus susceptible of adjustment to a number of positions, and of an improvement on the Yale chair which facilitates the placing of the patient in the knee-chest posture without requiring any movement on the part of the patient after he is properly seated on the chair. The improvement consists essentially of an upholstered board attached to the left arm of the chair, and a mechanism controlled by a crank and lever, which form a part of the running gear. The anoscope exhibited is an inch and a half (1.27 cm.) in length, and is designed for the inspection of that part of the rectum which is surrounded by the pelvic floor. The proctoscope is four inches (10.16 cm.) long, which the essayist claims is of sufficient length to reach into the inflatable rectum, and is not of so great a length as to obstruct a complete view of the rectal chambers, and yet is of sufficient length to reach the promontory of the sacrum when the pelvic floor is displaced upward by the proctologist's manipulations. Both of these instruments are seven-eighths of an inch (2.22 cm.) in diameter, this diameter having been determined upon as the result of calibration in many normal ani. The average diameter of the instrument is equal to the degree of painless expansibility of the anus. The obturators have contracted necks which constitute these instruments ointment-applicators. The middle part of the obturator is channeled; this qualifies the instrument as a nozzle for rectal irrigation; because of its contracted neck the obturator may be used as a self-retaining nozzle. The surface of each obturator is fluted in such a manner that it may be used as a two-way irrigator when properly fixed within its tube. The technic of the inspection is as follows: The patient is required to sit on the chair with his legs crossed and his body facing the knee-board, which is attached to the left arm of the chair. The chair-back is changed to the horizontal by a movement which puts the patient into the Sims posture. The fixed rectum is now examined by means of a short anoscope. After this portion of the rectum is inspected the chair's lever is extended, its crank

turned, and the chair tilted to such an extreme degree of the oblique lateral position that the chair-seat is almost perpendicular and the knee-piece, which is a part of the left arm of the chair and against which the patient's knees are pressing, is almost horizontal. Now, at a time when the patient is resting easily in a position which is equivalent to the knee-chest posture, the anoscope is introduced, the obturator withdrawn, and the inspection of the ballooned gut completed. The patient is passively returned to his feet by executing in the reverse order the several steps of this procedure.

THE RELATION BETWEEN THE GENITO-URINARY TRACT AND RECTUM; IN OPERATIONS UPON THE FEMALE, WHICH SHOULD RECEIVE PRIORITY?

This paper was read by DR. JOHN L. JELKS of Memphis. The author champions the assertion that the gynecologist should be as well prepared to remove hemorrhoids and treat an ulcerated rectum as to dissect a cicatrix from the cervix or repair a perineum. The rectal surgeon often finds that although the rectum is involved to such an extent as to be chiefly complained of the chief source of danger to the patient is a pus-tube or some other disease. In other words, to relieve the patient and restore her to health and happiness, he must also dissect from the cervix uteri a cicatrix and repair a lacerated perineum. In another case he may be required to sever a urethral stricture.

DR. WILLIAM B. BRUNS of Deckerville, Ark., read a paper, entitled

RECTAL FISTULA IN THE CAUSATION OF ISCHIORECTAL ABSCESS,

in which he reported a case with two large pus-pockets. He opened the abscess, emptied its cavity, and subsequently did an operation for the removal of the fistula.

DR. GEORGE D. KAHLO of Indianapolis followed with a contribution on

HYDROTHERAPY IN STOMACH DISEASES.

He said that water is essential to the performance of all physiological functions; yet its importance as a remedial agent is not so generally recognized. While he does not wish to be understood as opposing entirely the use of drugs in diseases of the stomach, he desired to say that he believes water ranks first among therapeutical resources. It may be used internally as a drink, in lavage, as a douche, and as a spray, and externally either applied locally or generally. Its effects, when administered internally, depend upon the conditions of the stomach in respect both to taking of food and whether or not there is normal digestion, as also upon the amount and temperature of the water ingested. Cold applications of all kinds are antiphlogistic, and when prolonged are sedative. They are indicated in acute gastritis and in the control of vomiting and hematemesis, but to obtain their full effect it is necessary that their local condition produce an active hyperemia of the skin. Hot applications are useful in the treatment of gastralgia, hyperesthesia, gastric ulcer, and chronic gastritis. While he does not ignore the beneficial influence of such agencies as diet, exercise, massage, and electricity, not to speak of a few of the more

important drugs which are thus used, and in obstinate cases especially, physicians are not likely to rely wholly upon any one remedy, however valuable. To be successful, hydrotherapy, like all other forms of treatment, has for its governing factors an exact diagnosis, a thorough knowledge of the patient, a full understanding of the causative influence and a clear conception of the effects of the remedial agent. To this must be added the confidence and cooperation of the patient.

AFTERNOON, SESSION.

DR. THOMAS HUNT STUCKY of Louisville read a paper on

AUTO-INTOXICATION OF INTESTINAL ORIGIN.

DR. EDWIN F. WILSON of Columbus, Ohio, read a CLINICAL REPORT OF A CASE OF ABSCESS OF THE LIVER.

In referring to the clinical aspects of abscess of the liver, he called attention to the essentials in diagnosis, and dwelt upon the history of the disease. He reported three cases. Of these the diagnosis was confirmed in two by post-mortem; in the other by aspiration. In all three the abscesses were chronic when they came under his observation. In only one of the cases was there a history of dysentery, although in one case scars of healed ulcers were found in the large intestine. In these cases he finds the enlargement of the liver is upward. Hoover has made a diagnosis of abscess of the liver from a friction sound in the axillary line between the eighth and tenth ribs. The essayist has not heard this sound in any of his cases, but this should be borne in mind when making an examination in this region. Two of the cases reported were mistaken for malaria. This mistake can be avoided by the more general use of blood examinations. The absence of the plasmodium would settle this at once.

DR. J. C. MORFIT of St. Louis, Mo., read a paper on THE IMPORTANCE OF EARLY DIAGNOSIS IN SURGICAL CASES.

The diagnosis of a disease ought to be the most attractive feature in the practice of medicine or surgery. It is the foundation on which any plan of treatment is applied. The physician should promptly and exhaustively weigh every indication of cause and effect and apply his therapy accordingly. He has recently seen two cases of pyosalpinx which were cured by surgical interference. Both had been treated by good practitioners, yet neither had made a complete physical examination, and consequently the real trouble was not detected. One patient was treated for indefinite inflammation of the bowels, the other for malaria. He cited these cases to emphasize the duty of the physician to himself and his patients of utilizing every available means to arrive at an early and positive decision as to what he is treating.

GONANGIECTOMY AND ORCHIDECTOMY FOR HYPERTROPHIED PROSTATE IN THE AGED.

An excellent paper on this subject was read by DR. GEORGE W. JOHNSON of Dunning, Ill., in which he re-

ported five cases, and made a second report on twenty-eight cases previously recorded.

After referring at length to the literature of the subject and reporting his cases in detail, Dr. Johnson arrived at the following conclusions: (1) All cases of prostatic hypertrophy should be given at least two weeks of palliative treatment, with rest in bed. This treatment should be regulated according to the conditions. (2) If no relief is had from this line of treatment, a thorough and systematic examination should be made for vesical calculi and polypi, as well as structural and malignant disease of the prostate and bladder. Cystitis, acute prostatitis, and prostatic abscess, should always be borne in mind. The urine should be frequently examined. In cases of cystitis the ureters should be catheterized to determine the condition of the kidneys. This can now be easily done by the Harris instrument. If by digital examination per rectum the prostate is found to be enlarged its approximate dimensions should be noted and urethral measurements taken. The patient should then be as well prepared as possible for operation. Having decided upon operative interference, the operator alone must decide upon what operation he will do. Gonangiectomy or orchidectomy offers less risk to life. (3) Chloroform should be used, as it requires less time and is not so irritating to the kidneys. The operation should consume as little time as possible. Gonangiectomy or orchidectomy can be done quicker and with less shock than any other operation. Strict attention should be given to the after-treatment. (4) The time for relief after operation is irregular. In his experience the relief has not been as clearly defined as to hours and days, nor as immediate as in most cases reported. In but two cases has the catheter been required after operation. Enuresis was constantly present in his cases for from one to six weeks after operation. (5) More immediate relief is given to cases of orchidectomy, and the prostate softens and diminishes more rapidly in such cases than where gonangiectomy is done. (6) The kidneys should be carefully watched and supported after operation. Mental symptoms appeared in three of his cases, two of which were due to renal disease. (7) Long-standing and troublesome herniæ can be successfully treated in the aged. He has successfully treated eighty-four such cases, in none of which has a recurrence taken place up this time. Of this number he has encountered the condition of congenital with acquired hernia in six cases. In five of the cases the acquired sac was outside of the congenital one. In one case it was within it. (8) Bassini's operation was resorted to in all but five cases, and in these Fowler's method was used. (9) Cystic degeneration of the testicles was met with in twenty-five cases. These usually had chronic hydrocele also, and were always cases with hernia of long duration. (10) When the intestines occupied the scrotum in large mass, they were returned to the abdominal cavity three or four days before the operation. In many cases there were adhesions preventing reduction. (11) Examinations were always made for vesical calculus, but none found. (12) The somatic condition is greatly improved, and when bilateral orchi-

dectomy was done, the patients became obese. (13) A thorough line of palliative treatment of from two to six-weeks' duration, with rest in bed, was given each patient. (14) In cases of herniotomy the patient was kept in bed from three to five weeks, unless very asthenic, with the hope of getting better organic union and thereby minimizing liability to recurrence.

THIRD DAY—MORNING SESSION.

DR. GEORGE BEN JOHNSTON of Richmond, Virginia, delivered the address on surgery.

His subject was

THE PROGRESS OF RENAL SURGERY.

Renal surgery is altogether a matter of the past three decades, having had its commencement with the successful nephrectomy performed by Simon in 1869. Dr. Johnston dealt with nephrotomy, floating and movable kidney, renal and ureteral calculi, neoplasms of the kidney, tuberculosis of the kidney, when not a part of a general military tuberculosis, which he said may either have its origin in the kidney, or may be an ascending affection from the bladder. Hydronephrosis also received attention. He made no attempt to arrive with anything approaching completeness at the progress or present status of surgery of the kidney. He endeavored merely to point out some of the advances which have been made in this field of surgery, and to indicate the present views of surgeons upon some of the most important points. Especially did he emphasize the conservatism which has developed along this line, and which now marks the attitude of the surgeon in this as in other branches — a conservatism which realizes that the glory of surgery is not in amputation and in mutilation, but in saving important organs.

WHY I PERFORM VAGINAL ABLATION IN PELVIC INFLAMMATORY CASES.

By DR. WILLIAM R. PRYOR of New York City. He stated why, when he performs hysterectomy in pus cases, he prefers the vaginal route. He dealt with the subject under the respective heads: Incision; separation of adhesions; direction of effort in the enucleation; hemostasis; drainage; hernia; accidents; instruments; narcosis and time; convalescence, and results.

Up to October 1st of this year he has performed vaginal hysterectomy for pelvic inflammatory lesions, exclusive of fibroids and cancer, eighty times. Since that time he has performed the operation a number of times. No patient has died either from the operation or from complications. He has no fecal fistulae to report, no sinuses, no vesicovaginal fistulae, and no hernias. There have been no cases of phlebitis and no intestinal obstructions. The vagina has in no case been shortened. For the technic of the operation he refers the reader to the *American Journal of Obstetrics*, volume xxxviii, No. 6, 1898.

A CONSIDERATION OF THE LIMIT TO OPERATIVE GYN-ECOLOGY.

By DR. SHELBY C. CARSON of Greensboro, Ala. The purpose of this paper was to emphasize the importance of medical gynecology; to show that surgery cannot advance a legitimate claim to even the larger portion of this great

field. A beautiful tribute was paid to this branch of medicine by applying to it the eloquent eulogy of Daniel Webster upon justice. Surgery as a science is pronounced as practically without limit, but as an art it has probably reached the summit. What constitutes true surgery was then discussed, the author quoting not only from textbooks, but from the latest utterances of such men as Wyeth and Annandale, proving that surgery, of all branches, is based upon principles, and hedged in by fixed laws; that when these are disregarded there is no true surgery. The folly of the ablation of the ovaries and tubes in many cases was made manifest. The nerve element in women was closely considered, the anatomical connection between the nervous system and the genitalia being defined. As a consequence, neurasthenia is a frequent result, for which surgery affords no relief.

THE THERAPEUTIC VALUE OF LEAVING LARGE QUANTITIES OF NORMAL SALT SOLUTION IN THE ABDOMEN.

The author of this paper was DR. J. WESLEY BOVEE of Washington, D. C. He reported six cases to illustrate the usefulness of this procedure. In a number of cases the effect was not so marked, and in a few but little benefit was apparent. The first case was one of papillomatous broad ligament cyst; fifteen liters of normal salt solution left in abdomen; marked increase in urine. Case II. Large multiple uterine fibroma, and large ventral hernia; secondary operation; three liters normal salt solution in abdominal cavity, and one liter under breast, with marked urinary increase. Case III. Papillomatous fibro-adenocystoma of right broad ligament; eight liters normal salt solution left in abdomen; considerable urinary increase. Case IV. Multilocular ovarian cyst; 5000 c.c. normal salt solution left in abdomen; increased excretion of urine. Case V. Multiple fibroma of the uterus and pelvic adhesions; great shock; two liters of normal salt solution left in abdomen; increased urinary excretion. Case VI. Multilocular cartilagino-cystoma of left ovary; seven liters normal salt solution left in abdomen; excretion nearly doubled during the following six days.

The marked stimulating effect of the remedy on the kidneys was noticeable in all these cases. Penrose has found that the average amount of urine excreted during the first twenty-four hours after operation in 100 cases was 13.4 ounces; for the second, 14.6 ounces, and for the third, 19.8 ounces. He also found that for the first day the maximum amount of urine was 27 ounces. In many of the cases of the essayist this maximum was much more than doubled. While the number of cases in which he has used these large quantities of normal salt solution is small, the effect should encourage a further application of the remedy in proper cases. Not one evil result of the solution was observed in any of the cases.

DR. F. F. BRYAN of Georgetown, Ky., read a paper, entitled

A PLEA FOR PELVIC CELLULITIS AND PERITONITIS.

He reported twenty cases and drew the following conclusions: (1) Cellulitis and peritonitis are important manifestations leading to the greatest amount of suffering

that woman is heir to. (2) Their recognition and the retention of their nomenclature should keep physicians constantly on the watch for them. (3) Their proper treatment in the early stages will obviate these latter evils to a great extent, as cellulitis and peritonitis are easily curable in the early acute stages. (4) That should opportunity for an early cure not be offered, then the chronic cases should have the medical and minor (gynecological treatment mentioned by him, under which many will be cured, others obtain relief, and a respectable quota will of necessity have to turn to surgery for their cure.

AFTERNOON SESSION.

SURGICAL TREATMENT OF PARALYSIS IN CHILDREN.

DR. ALEX. C. WIENER of Chicago read this paper. A clear distinction should be made in diagnosis as well as treatment between cerebral and spinal paralysis. A common symptom in both diseases is paralysis, and yet there is a great difference between the two affections. In spastic paralysis one group of muscles becomes rigid and overpowers its opponents, rendering them overstretched and useless, but still their innervation is by no means disturbed. In spinal paralysis there is a true degeneration of the lower neuron and the dependent muscular groups. This being borne in mind, the treatment is to equalize the balance between the spastic and the overstretched muscular group by lengthening the rigid muscles. This is done either by tenotomy, resection of tendons, or loosening the attachments of the muscles from the bone as is done in a spastic condition of the adductor muscles of the pelvis. The after-treatment consists mainly in not allowing the extremity to leave its over-corrected position too soon, and in strengthening the functionally weakened opponents by massage, baths, and electricity. Apparatus in these cases is utterly useless and should be entirely discarded. Any other peripheral cause of reflex irritation, as phimosis, occlusion of the prepuce, or of the clitoris, of course is to be removed. In anterior poliomyelitis we have to deal with a true paralysis of certain muscular groups. This may be overcome by apparatus which supplants the paralyzed muscles, or by operative procedures. This consists in dividing the belly of an active muscle up to the place of its insertion and sewing the corresponding part of the tendon into the cleft of the tendon which belongs to the paralyzed muscle. The inactive muscle is supplied with the vigor of the innervated muscle, taking care, as Milliken has pointed out, that the sheath of the tendon is preserved. By this artificial change in the arrangement of muscles the function of one muscle is transmitted to another. There is taking place an alteration of the reflex activity in the nerve-centers of the muscles; hence, the importance of the function of the extremity is by no means a mere mechanical act.

THE DIAGNOSIS OF GONORRHEA IN WOMEN.

By JOSEPH RILUS EASTMAN of Indianapolis. The diagnosis of this affection in women is comparatively easy, even without the microscope. With a history of impure coitus, free purulent secretion from the vulva, vagina, and urethra; intertrigo, burning on micturition, and vesical

tenesmus, the diagnosis is not far to seek. Upon inspection one usually detects a discharge of tenacious pus, or greenish or yellowish streaks upon the linen may alone be in evidence. The symptoms of gonorrhea in women were dwelt upon at great length.

The gonococcus grows fat upon flat epithelium. A comprehensive examination of the discharge is not complete until the secretions of the urethra, Skene's lacunæ, the glands of Bartholin, the vagina and cervix have been searched through; and in chronic cases several preparations should be made from each of these. To secure un-mixed gonorrheal pus from the cervix uteri care should be taken that the platinum wire does not come in contact with the vagina. It is best to first rinse and then dry the vagina with cotton to free it from mucus.

It will be concluded after many examinations for gonococci that the urethra is the seat of predilection of gonorrhea in women, and that the vulvitis and vaginitis are secondary, being caused by the bathing of these parts with the discharge from the urethra and cervix. The diagnosis of acute gonorrhea may be made by contemplation of the clinical phenomena alone. For example, if acute urethritis be present, it is almost certain that the gonococcus is to blame. Observation for a few days will establish the diagnosis beyond conjecture, since the symptoms of non-specific urethritis will disappear rapidly. In chronic gonorrhea too much dependence upon clinical manifestations is hazardous. Condylomata are often present, but appear also often independently of gonorrhea. Débris-laden discharge from the vulvovaginal glands is usually an expression of old gonorrhea, but other germs, as the staphylococcus aureus and saprophytic forms may occasion just such discharge. Among the more common indications of chronic gonorrhea are the maculæ gonorrhoeicæ of Sanger, red papules about the openings of the vulvovaginal glands, sclerotic inflammation of these glands, in which the glands are felt as hard, non-sensitive nodules under the examining finger, cysts of these glands, and scars and erosions in the vulva. All of these conditions may be caused by other germs than gonococci. Here, as in acute gonorrhea, the most reliable indication is the urethritis.

POSTERIOR DISPLACEMENTS OF THE UTERUS.

DR. A. M. CARTLEDGE of Louisville read this paper, in which he dealt with the subject from a clinical standpoint. He discussed the causes, symptoms, and diagnosis of these displacements.

Treatment should be divided into measures which correct the cause and methods of support by suturing and shortening the round ligaments. Sometimes it is necessary to employ both methods in the same individual in order to make the result durable. In the first category are to be included thorough curettage; repair of cervical lacerations, if present; perineorrhaphy and restoration of the pelvic floor; tonics, laxatives, and rest. These methods, if carried out successfully, will ultimately relieve the vast majority of posterior displacements. They are not so dramatic or sudden in their relief as ventrofixation and Alexander's operation, but are more in accord with ra-

tional ideas. In order to succeed they require time—six to eight months for the structures to resume their normal tone. They also usually require to be supplemented during some weeks or months following their performance by anterior and posterior tamponade, or a well-fitting pessary to hold the uterus in position until the repaired parts regain their strength. It is irrational surgery to use any form of support until existing causes have been as far as possible removed.

As between ventrofixation, vaginofixation, and Alexander's operation, preference should be given the latter, if no accompanying disease is suspected. Where such disease exists, the operation of ventrofixation should be practised, as it gives opportunity for inspection and correction of the pelvic disease. It is the best operation in all cases of adherent uteri.

DR. A. H. CORDIER of Kansas City, Missouri, followed with a paper, entitled

SOME PHASES OF INTESTINAL OBSTRUCTION.

The causes of this condition are many and varied. Modern methods of diagnosis in skilled hands have led to the saving of many lives, which, heretofore, would have been lost by delay in resorting to the proper treatment. While the diagnosis of intestinal obstruction can usually be made early, there are some cases in which the pathological manifestations are so insidious or vague that their detection requires time and much careful clinical analysis. The symptoms of intestinal obstruction were thoroughly outlined. He said the falsehoods uttered by pain and the truths untold by opium have been very expensive to human life in the management of intestinal obstruction.

Surgical treatment for the relief of this condition should be resorted to early. It should be thorough and quick. No protracted delays or chronic surgery should enter into the management of an acute intestinal strangulation, as these patients stand prolonged anesthesia and slow surgery badly.

DR. F. F. LAWRENCE of Columbus, Ohio, followed with a contribution, entitled

ESSENTIALS TO SUCCESS IN ABDOMINAL SURGERY.

DR. BAYARD HOLMES of Chicago read a very interesting paper, entitled

THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITER.

He said the surgical treatment is based on the theory that in this disease the direct morbid factor is an increase in the normal excretion of the thyroid gland. He gave a synopsis of the physiology and pathology, and an outline of the embryology of the thyroid, after which he reported a case upon which he had operated, which was a very powerful argument in favor of surgery in dealing with this affection.

SOME FORMS OF GANGRENE AND THEIR TREATMENT.

By DR. J. S. NOWLIN of Shelbyville, Tenn. Gangrene means death of a part, and is applied to the soft tissues. The blood is always involved in this disease. If the blood is performing its functions there can be no local

death. The blood-channels being destroyed, gangrene necessarily follows. Gangrene appears sometimes suddenly after injuries to the spinal cord. A normal functional activity in the blood prevents the first step in the process of inflammation. Simple endarteritis may be the cause of gangrene; an inflamed artery is then surcharged with blood, stasis results, coagulation takes place, the lumen is destroyed to a certain extent, and gangrene results. Sepsis is doubtless a most frequent cause of gangrene in the extremities. In traumatic gangrene the surgeon should look out for sepsis. If there be a simple endarteritis with tissue formation amputation should be performed at the first evidence of failing vitality.

FOURTH DAY—MORNING SESSION.

DR. A. M. OSNESS of Dayton, Ohio, contributed a paper on

DIPHTHERIA AND ITS LOCAL TREATMENT.

He said the pathological process in diphtheria is caused by the serum albumin at the point of infection becoming moderated from incorporation with the specific virus. It is then repudiated by the blood-stream and exudes into the neighboring tissues, where it, plus necrotic cells and fibrin, forms the pseudo-membrane, that is, a congenial nidus for the Klebs-Loeffler bacillus. The intoxication of the system depends upon the energy of the lymphatics upon which devolves the removal of the exudate. In the treatment the use of antitoxin serum offers the risk of over-toxicity, from additional toxin or systemic impairment from invalidation of the centers; while monosulphid of calcium has been given in $\frac{1}{4}$ -grain doses every half hour for a period of thirty-six hours to children with the best of results. Water should be taken internally quite freely to help elimination of the toxin, local swabbing being resorted to as well, with a mixture such as the physician deems necessary.

DR. WILLIAM K. JAKES of Chicago followed with an excellent contribution on

THE EARLY DIAGNOSIS OF DIPHTHERIA.

He said that outside of laryngeal complications the mortality from diphtheria is due to the toxin produced by the Klebs-Loeffler bacilli. No physician can successfully treat diphtheria unless he understands the nature of this toxin, how it is produced, and how the cells may be fortified against its destructive action. He must understand that the Klebs-Loeffler bacillus is a distinct living entity, or vegetable organism; that one of the products of its existence is diphtheria toxin, just as the result of the life of the yeast plant is alcohol. To appreciate the danger of his patient a physician must understand the rapidity with which these bacilli multiply under favorable conditions. The clinical symptoms manifesting their residence may give no indication as to the rapidity with which the fatal amount of toxin is being produced. Understanding that toxin is a product of these germs, their multiplication means an increased amount of toxin which soon reaches the fatal point unless checked by the use of antitoxin. This demonstrates the importance of a physician knowing

at the earliest possible moment what germs are present in an angina.

In order to ascertain the value of direct diagnosis, by which is meant the examination of material taken directly from the infected area without waiting for incubation, the Chicago Health Department has introduced the following culture outfit for the use of physicians: A sterilized swab is placed in a glass tube; a slide carefully wrapped in paper is placed with this in an envelope together with a culture-box and directions for using the same. Physicians are requested to inoculate the swab from the inflamed site, spread a little of the mucus upon the slide and allow it to dry. The culture medium is inoculated from the same swab and it is returned to the glass tube. The whole outfit is then to be sent to the nearest incubator station or laboratory.

When no antiseptic treatment has been administered before the culture is taken, and the disease manifests malignancy by stupor, hoarseness, or swelling of the cervical glands, it has been possible in about fifty per cent. of the cases to find sufficient bacilli to warrant a diagnosis of diphtheria even before any trace of membrane is visible. When it has been possible to get a small portion of membrane to spread on the slide, there has been no difficulty whatever in about seventy-five per cent. of the cases in making a direct diagnosis.

In the malignant form of diphtheria nearly fifty per cent. of the patients die unless proper treatment is administered. Any physician who neglects to make a correct diagnosis during the time when the remedy is efficacious, that is, during the first two or three days, is responsible for the result.

The technic of bacterial diagnosis of diphtheria is simple. The entire outfit for this work may be obtained for less than \$100. The essentials may be acquired at home by any physician who is willing to devote no more than his leisure moments to it.

To demonstrate the protective value of antitoxin the following experiment has been conducted: On October 10th, in the presence of Dr. F. W. Reilly, Assistant Health Commissioner of Chicago; Dr. Wynekoop, Assistant Bacteriologist, the essayist, and Dr. Adolph Gehrmann, nine guinea-pigs were injected with four times fatal doses of diphtheria toxin. The first three were immunized two days previously by the injection of 0.1 c. c. each of Parke, Davis & Co.'s antitoxin. The next three received 0.5 c. c. of the same antitoxin each, following the injection of toxin. The third three have had no treatment whatever since the injection of the toxin. The pigs were correctly labeled as to condition, and presented decided effects upon the fourth day. All pigs that received antitoxin are alive and apparently well. Of the three not protected two are dead. The third being still alive, would indicate the possession of natural immunity against the toxin.

DR. H. W. WHITTAKER of Columbus, Ohio read a paper on

PICHI.

In Chili, South America, pichi is found growing as a shrub in abundance. No doubt the active principle of the

drug resides in the balsamic resin, but chemical examinations have so far been unsatisfactory in determining its chemical composition.

The annoying symptoms of chronic cystitis with enlarged prostate yield to the action of pichi, as was illustrated by the citation of a case. Cystitis complicating specific urethral infection, involving the prostatic urethra, is a combination which under favorable circumstances does not readily respond to treatment, and yet under the influence of this drug the conditions become more tolerable. This remedy is indicated in all of the various forms of diseases of the liver. In gall-stones pichi has proven a valuable remedy in assisting the secretion of bile and theoretically aiding the discharge of the stones. Uric-acid formations rapidly disappear from the urine under the corrective influence of this remedy and the general condition of the patient improves.

DR. J. HENRY CARSTENS of Detroit reported a case of rupture of the body of the uterus during confinement.

A FEW PRACTICAL POINTS IN THE TREATMENT OF POSTERIOR URETHRITIS.

This paper was read by DR. A. RAVOGLI of Cincinnati, Ohio. The author recapitulated the principles of the treatment for this disease as (1) irrigations by the Janet method in a recent case of gonorrhea will in many cases prevent posterior urethritis. (2) Irrigation with the recurrent catheter with permanganate of potassium, followed by injections of protargol, will cure in a relatively short time a case of subacute posterior urethritis without complications. (3) When chronic posterior urethritis lasts for a long time, and has caused infiltration of the submucous tissues, then the application of a sound with ichthyol salve gives the best results.

DR. F. E. KELLY of Lamoille, Ill., read a paper on

VARICOCELE.

The author outlined the operation for radical cure and the indications for its performance. He considers Bennett's operation of resection of the veins and shortening of the spermatic cord the ideal radical procedure, which he described in detail.

DR. R. A. BATE of Louisville read a paper, entitled

THE ARTHRITIC DIATHESIS.

The term diathesis is applied to an inherited predisposition to altered nutrition. He assumed in diathesis an inability on the part of the cells to produce oxidation. He mentioned the diseases generally conceded to be dependent upon the arthritic diathesis. He has experienced favorable results from antilithemic remedies in glycosuria, nasal and bronchial asthma, lithiasis, albuminuria, obesity, eczema, paresis, rheumatism, angina pectoris, recurrent typhilitis, vertigo, biliousness, dyspepsia, neuralgia, and migraine.

DR. ALBERT E. STERNE of Indianapolis contributed a paper, entitled

A TRILOGY OF DISEASES: ACUTE ARTICULAR RHEUMATISM, ENDOCARDITIS, AND CHOREA.

He advanced considerations concerning the nature of these three affections and of the connection of chorea with

manifestly infectious disease, namely, acute articular rheumatism. A case was reported in point. While he could report several instances of chorea associated with both arthritis and heart lesions, this is the only case known to him where the sequence of this triology seemed distinctly connected with a suppurating injury, following a fairly incontestable portal to the invasion of the ordinary pus-microbes to the system. If it be admitted that valvular disease is mainly rheumatic, or at least infectious in character, then the list of cases of chorea connected with the diathesis becomes much greater, inasmuch as from twenty-five to fifty per cent. (Osler) of cardiac patients give a history of chorea. Looking at the question impartially, it seems almost imperative to assume an intimate relationship between the three diseases.

The following preamble and resolutions were offered and unanimously adopted:

WHEREAS, The general public, the medical profession, and the drug trade of the United States have long suffered extortion at the hands of foreign manufacturers of synthetic remedies, and

WHEREAS, Our lax and indulgent patent laws bestow a triple monopoly upon the process, the composition and the name of chemical products for medicinal use, thus excluding every possibility of a healthy competition; and

WHEREAS, The same evil has been recently disclosed in the domain of biological medicine by the patent granted Professor Emil Behring and the Hoechst Farbwerke on antidiphtheritic serum, a patent which could not be obtained in Germany, France, England, or Canada; therefore,

Be It Resolved, by the Mississippi Valley Medical Association, that the seal of its condemnation be placed upon the unethical and unprofessional conduct of Professor Behring; that it is the duty of every member to renounce the use of the Behring serum; and that the American manufacturers who purpose contesting the patent in the courts are entitled to the moral and substantial support of every American practitioner.

Resolved, That an earnest appeal be made to the members of the Commission on the revision of our patent and trademark laws, appointed by President McKinley, and their assistance invoked for the modification of existing laws and the suppression of prevailing abuses.

Resolved, That a copy of these resolutions be sent to every medical journal in the United States and to the members of said Commission, as follows: Hon. Arthur P. Greely, Assistant Commissioner of Patents, Washington, D. C.; Hon. Peter Grosscup, Chicago, and Mr. Francis Forbes, New York city.

Resolved, That the members of this Society be urged to write their Congressional representatives at Washington and bespeak their support of any measures of relief ultimately proposed by the Commission.

The following officers were elected for the ensuing year: President, Dr. Duncan Eve, Nashville; first vice-president, Dr. A. J. Ochsner, Chicago; second vice-president, Dr. J. C. Morfit, St. Louis; secretary, Dr. Henry E. Tuley, Louisville, re-elected; treasurer, Dr. Dudley S. Reynolds, Louisville, re-elected. Chicago was selected as the place

for holding the next meeting, the time of which is to be fixed by the Committee of Arrangements and the executive officers.

NEW YORK STATE MEDICAL ASSOCIATION.

Fifteenth Annual Meeting, Held in Mott Memorial Hall, New York City, October 18, 19, and 20, 1908.

FIRST DAY—MORNING SESSION.

THE meeting was called to order by the President, DR. DOUGLAS AYRES of Montgomery County. An address of welcome was delivered by DR. FREDERICK HOLME WIGGIN of New York, Chairman of the Committee of Arrangements. The treasurer's report, read by the secretary, DR. E. D. FERGUSON of Rensselaer County, showed a balance in the hands of the treasurer of \$4895.75. Despite the fact that \$2000 was contributed to the Rush Monument Fund during the present year, the amount on hand is only \$1622 less than it was last year.

DR. WIGGIN then reported the result of the effort of the committee appointed at the last meeting to secure proper legislation for the regulation of dispensaries and the prevention of the abuse of medical charities. He detailed the differences between the bill introduced into the Legislature in 1898 and the Sullivan bill that had been vetoed by the Governor in 1897. He recounted how, though the Senate had passed the bill thus modified with but two dissenting votes, it had been killed in the Assembly committee despite the strenuous efforts of the united committees of the various medical societies, and suggested the appointment of a new committee to carry on the work, which practically every one is agreed is so absolutely necessary. He insisted that there is no effort being made to curtail medical charities, but on the contrary, the intention is to increase true charity and make it possible to aid more efficiently the worthy objects of such charity by eliminating from the number of those applying for free medical relief all those found on investigation to be undeserving of it.

To the question as to what arguments had been brought forward that had prevented the passage of the bill through the Assembly committee, Dr. Wiggin replied that there had been practically none, and certainly none that had been deemed of any weight by the Senate committee, though the same set of arguments opposing the bill were presented to both committees.

DR. WICKES WASHBURN of New York begged to supplement Dr. Wiggin's statement to this extent: "Members of the Senate committee had stated that if the committee in opposition to the bill had no further arguments to present than those they brought before them their presence was calculated to hurt rather than help their cause."

DR. DOUGLAS AYRES then read the President's Address,

A RESUME OF MEDICAL AND SURGICAL PROGRESS.

He detailed the striking advances that have been made in all departments of medical science during this last half century, and dwelt upon the fact that the surest and easiest way to keep abreast of medical progress is to be thor-

oughly interested in the proceedings of medical societies, actively as a contributor, passively as an interested attendant at their sessions, and hoped that the present meeting of the New York State Medical Association would fulfil the promise of its predecessors and the hopes of interested members.

DR. J. G. HUNT of Oneida County read the first paper on the program, entitled

CONSERVATIVE SURGERY IN CRUSHING INJURIES.

He considers that the striking advance in modern surgery since the introduction of antiseptics has been in the line of even greater conservatism in the treatment of injured limbs. He thinks that the limits of this conservatism have not been reached and that limbs are sometimes sacrificed even yet that might be saved. He illustrated by a case and by statistics from his practice among railroad employees, and mill and factory hands, that conservatism must be the keynote of modern surgical practice in the treatment of the injuries of this class of people even as regards the smallest member.

DR. OVERTON of Suffolk County read a paper on

THE TEACHING OF PHYSIOLOGY AND HYGIENE IN THE PUBLIC SCHOOLS.

He considers that our best hope that the people will sooner or later have some standard by which to distinguish the mere money-making quack from the serious physician, is founded in a practical knowledge of the elementary principles of physiology and hygiene to be obtained at our public schools. How important this matter is for the people may be gathered from the extent to which the advertised remedies and the advertising quacks have invaded all advertising media. The present teaching does something toward securing a practical knowledge of physiology and hygiene, the only one that can do any good, but falls far short of what might be accomplished. There is danger of the pupils merely learning a series of thoroughly misunderstood scientific terms rather than acquiring any practical scientific knowledge. It is unfortunate, too, that so much weight is laid by existing laws upon the teaching of the effects of but one form of abuse upon the organism. There is, perhaps, some compensatory advantage in the fact that a well-grounded knowledge of one form of abuse will more easily lead on reflection to a realization of the results of other abuses also.

A practical knowledge of physiology could be best imparted by a series of simple experiments on animals, cold-blooded ones as the frog, for instance, being preferably employed. Simple demonstrations of such things as the circulation could be easily made this way in a manner that would never be forgotten. The compound microscopes, one of which every school is bound by law to have, should be brought into use, and the facts and principles of cellular life, the important groundwork of all physiology, made the subject of actual demonstration.

DR. DELANCEY ROCHESTER of Erie County, in the discussion said he thought that something of the significance of venereal diseases should be taught at least to older pupils just before leaving school. The ignorance on this

subject, fostered by a prudish prejudice in the matter, is the source of a great deal of physical evil to young people just entering life. Knowledge of these subjects instead of adding to pruriency would form an additional safeguard to morals and the best possible adjuvant factor for protection in temptation. The significance of venereal disease is known to be very different now to what it had been in the past, and it is too bad that this knowledge is not more widespread.

Dr. Overton, in closing the discussion, said that publishers of school text-books who are presumed, at least, to know what is or is not salable, absolutely refuse to allow even the slightest passing reference to such subjects.

DR. STEPHEN SMITH of New York read a paper on

A NEW METHOD OF AMPUTATION AT THE KNEE-JOINT APPLICABLE TO CASES OF SENILE GANGRENE OF THE FOOT.

Dr. Smith had devised his operation for a patient aged seventy-eight, with alcoholic history and extremely rigid arteries, whose large toe was gangrenous. There were dusky spots around the ankle, and an enfeebled circulation in the foot and leg. Instead of adopting the high operation above the knee that has been recommended by so many American and English surgeons, and lately again by Mr. Jonathan Hutchinson, he studied the circulation to the knee, and planned his incisions so as to cut as few main branches of arteries as possible. The blood-supply to the soft tissues in the region of the knee is very copious, and by this operation none of it is interfered with. His directions are: "Make a straight incision, commencing two inches above the upper border of the patella downward over the center of that bone to the tuberosity of the tibia. From the lower extremity of this make two curved incisions, the convexity of each being downward, one to the external, the other to the internal border of the leg. Join these two incisions posteriorly by a straight incision across the upper border of the calf. Dissect these two flaps from the tibia and fibula, remove patella, and disarticulate the tibia." He secured union by first intention in his case.

DR. GOULEY, in the discussion which followed, said that some cases of senile gangrene do well with amputation at the knee-joint, but many require amputation higher up. He had seen a case in which the thrombus occupied the upper third of the femoral, when, of course, even amputation above the knee, unless at an unusual height, would have failed.

DR. CLEAVER of Reading, Pa., asked Dr. Smith how hemorrhage had been controlled during the amputation, and Dr. Smith explained that it was by digital pressure, the delicate sclerosed arteries being protected from possible injury even from pressure of the fingers by a pad.

Dr. Gouley said the Esmarch bandage is always contraindicated in these cases because of the danger of injuring the arteries.

DR. LEROY J. BROOKS of Chenango County then read a paper, entitled

SUBNORMAL TEMPERATURE.

Though the significance of this condition has not at-

tracted much attention, he considers it quite as important as supranormal temperature. All persistent subnormal temperatures he thinks pathological, despite the fact that a certain number of cases have been reported where this phenomenon existed in supposedly healthy people. The subnormal temperature is especially prone to precede and give warning of certain serious conditions. It has preceded in his experience in a number of cases the development of neurasthenia and hysteria. It was sometimes a prodrome of impending mental disturbance, physical and mental depression being coordinate. He noted it as an important index of approaching mental trouble in two members of a family, seven of whom had committed suicide by hanging.

He has noted it in dipsomaniacs just before an outbreak of their trouble. It constitutes in these cases a most significant index of the intense state of physical depression that supervenes, and finally drives the patient inevitably to the taking of stimulants to excess. In a certain number of cases subnormal temperature would seem to be the expression of a deficient circulation, due to hypoplasia of heart and blood-vessels, the heart especially being too small for the body, and then the subnormal temperature persists.

DR. DELANCEY ROCHESTER had seen subnormal temperatures in cases in which the heart seemed to have been too large for the body—in athletes, bicyclists, and football players. The subnormal temperatures were noted at times when the men had not been overexerting themselves, and seemed the expression of circulatory disturbance. He had found the excretions deficient in these cases from kidneys, bowels, and skin, though there were no gross changes in the urine. He considers the capillary circulation generally throughout the body to be at fault, and believes in stimulating in these cases, especially the cutaneous capillaries.

DR. OVERTON had seen cases of so-called malaria on Long Island, typically what would be called "biliousness" from the patient's general feelings, accompanied by subnormal temperatures. These, in well-drained localities, are not malarial but represent generally depressed physical conditions.

DR. DWIGHT L. HUBBARD of New York read a paper on

DENTAL PATHOLOGY AND ITS RELATIONSHIP TO GENERAL HEALTH.

Under the term dental pathology he would include oral pathology. He pointed out the significance of pathological conditions in the mouth for the digestive tract and for the auditory and olfactory tracts. He called attention especially, since it is neglected too much in our day, to the importance of reflexes from the mouth, and particularly from carious teeth. For the eye, he showed, by citation of cases from literature, that these dental reflexes are especially important, amaurosis and even glaucoma developing at times as a consequence of dental irritation, the latter, as Power has shown, because of reflexes from the fifth nerve setting up increased intra-ocular tension. Power insists that in all obscure eye lesions the teeth should be carefully examined.

Papers on "Urethral Stricture," by J. W. S. Gouley of New York, and on "A Convalescent's Shoe for Club-foot Cases," by Dr. S. E. Milliken of Texas, were read by title.

AFTERNOON SESSION.

DR. FLORENCE O'DONOHUE of Onondaga County read a paper on

STATE EXAMINATIONS OF MILK FOR TUBERCULOSIS.

New York State was the first to establish an inspection of dairies and of herds of cattle in order to limit the spread of tuberculosis and prevent the distribution of milk in which tubercle bacilli existed. She had been imitated in this by other States, notably by Massachusetts, that had now a very practical system of inspection, and required a certificate of health for all cattle entering the State. Unfortunately the work of inspection and especially of eradication of tuberculous cattle could not go on in New York during the last two years for lack of an appropriation for that purpose. Increasing experience has shown that much less tuberculosis comes through inhalation than was formerly thought. Especially in children is this true and as milk forms the exclusive article of diet of artificially-fed children, their danger can be readily realized. There are undoubtedly in the Hudson River counties, especially those close to New York City, tuberculous cattle. The danger of infection is constantly present. Dr. O'Donohue asked the members of the State Medical Association to interest themselves in this important question in order that the Legislature might be induced to appropriate money for the continuance of the hygienic work in the matter of eradication of tuberculous cattle that had been of such important service and had reflected so much honor on the State.

DR. MARCY of Massachusetts, in the discussion, said that in Massachusetts a great deal has been accomplished by the education of public opinion in the matter, so that now one of the first questions of the milk consumers is "Have your cows been tested for tuberculosis? Is your dairy regularly inspected?" etc. This education of public opinion in the matter he thinks extremely important.

DR. KNOPF of New York considers the time when the main source of infection in tuberculosis will be thought to be by inhalation is passing away. Not alone children but adults are infected by ingestion. Even when the initial lesion is pulmonary, the bacillus has been carried from the digestive tract in the lymph-paths and has settled in the apices of the lungs as *loci minoris resistentie*.

DR. O'DONOHUE, in closing the discussion, thought that the rôle of inhalation as an etiological factor of tuberculosis has been exaggerated. One proof of it is that despite the almost universality of the bacillus infections are after all infrequent, and second that the bacillus even in a favorable culture-medium is killed by six-hours' exposure to the sun, so that the much-feared danger from dried sputa getting into the air is exaggerated.

DR. DELANCEY ROCHESTER of Erie County read a paper on

THE TREATMENT OF CASES OF PULMONARY TUBERCULOSIS THAT CANNOT GO AWAY FROM HOME.

His method as illustrated by histories from his case-book consists in fresh air—the open-air treatment, with gentle exercise and hydrotherapy besides the usual drugs. He has his patients live almost entirely in the open air, take a tepid or cold douche every morning, with a brisk rubbing; a warm bath twice a week. He uses an emulsion, guaiacol and terebene in milk of magnesia, with excellent results, and uses inhalations from "the agar-holder inhaler" of the essential oils, especially oil of peppermint. Sunlight and air are, however, the curative agents for consumption, and they are of much more importance in its treatment than even any supposed effect of climate.

DR. S. A. KNOPF of New York, in discussing the paper, said that the ideal treatment of tuberculosis is not now the climatic one, but the treatment of patients in sanatoria. German experience has shown in recent years that this gives excellent results. The objection against it is its expense, but this is unfounded. At present patients in our public hospitals cost \$1.16 per day, while there are sanatoria in the Adirondacks where the expense per patient per day is less than \$1. It is possible then to treat even poor patients in sanatoria, thus removing so many foci of infection from among ordinary hospital patients and securing a large percentage of recoveries. The present percentage of recoveries from tuberculosis in public hospitals is practically *nil*.

In discussing the treatment of certain distressing symptoms of pulmonary tuberculosis he insisted upon the discipline of cough. In German sanatoria during meals no one is allowed to cough and a cough is scarcely ever heard. For pleurisy he referred to the good, old remedy of dry cups. For bad pulmonary hemorrhage tying off the limbs is wonderfully efficacious.

Closing the discussion Dr. Rochester reminded the Association that an effort is being made now to secure an appropriation from the State for the erection of a public sanatorium for needy tuberculous patients in the Adirondacks. The committee of investigation appointed last year as a consequence of an appeal from Erie County is about to report favorably, and he hoped that the members of the Association would see fit to use their influence to secure the passage of a bill calculated to be of such benefit to the community.

DR. F. P. HAMMOND of New York County read a paper on

GENITAL NEURALGIA AND THE GENITO-REFLEX PAINS.

He insisted that severe genital neuralgia may develop as the result of but very slight pathological processes in the genital tract. It may often be cured, as he illustrated copiously by cases, by simple gynecological treatment. It is, however, sometimes a prodromal symptom of serious diseased conditions and as such may direct the physician to proper prophylaxis.

DR. DIDAMA of Onondaga County treated the Association to some characteristic memoranda from a wide practice. The paper was full of the quaintest, good natured humor, expressed in charming old-fashioned English, and containing withal, some excellent practical points

in the simple treatment of disease as, for example, letting patients with bronchiectasis cough while leaning away out of bed so as to empty their tubes thoroughly without being subjected to the strain of coughing all the secretion up hill.

DR. H. O. MARCY of Massachusetts read a paper, entitled

A CASE OF FISTULOUS OPENING BETWEEN THE ILEUM AND BLADDER; OPERATION; CURE.

The fistula was the result of ovarian abscess in a sterile married woman. Its position above the ileocecal valve was diagnosed by the character of the fecal portions found in the urine and the fact that milk injected high up into the colon did not come through the bladder. Dr. Marcy also presented 970 gall-stones removed from one patient, the largest number so far as he knows that has ever been taken out, and some of the smaller ones of this collection were lost before being counted.

DR. FREDERICK HOLME WIGGIN presented a fibromyoma weighing twenty-one pounds, and a calcified fibroma weighing seventeen pounds. In the removal of the latter, in order to avoid threatened hemorrhage, he had tried rapid excision and had wounded the bladder very extensively. He had sutured it from within, however, and recovery had been practically uninterrupted.

EVENING SESSION.

DR. SEYMOUR OPPENHEIMER of New York County read a paper on

TUBERCULOSIS OF THE MIDDLE EAR.

This affection occurs much oftener than is thought and is usually the result of infection from the pharynx. It may remain latent for a good while and its symptoms are sudden appearance of pus in the external auditory canal without previous or but very slight symptoms of inflammation. The absolute differential diagnosis is made by finding the bacillus of tuberculosis in the pus. This is not always easy and a number of specimens may have to be examined. In a large majority of the cases there are signs of pulmonary tuberculosis present. When there is not there will usually be found a primary tuberculous focus somewhere else in the body. Milligan claims that primary tuberculosis of the middle ear occurs not infrequently but this is not generally accepted. The ideal treatment would be the radical extirpation of the affected tissues but this is not easily accomplished and relapses are frequent. Attention to the general health, local cleansing, and perhaps the application of the quasi caustics, used for tuberculosis of the larynx, lactic acid, and the like are the best treatment.

DR. SAMUEL ALEXANDER of New York County then gave a lantern-slide exhibition relative to prostatic disease. A number of excellent photographs and microscopic sections of conditions in the prostate were shown. These served to demonstrate that the so-called post-prostatic vesical pouch in cases of prostatic disease is really a post-trigonal pouch. The band of muscular fibers connecting the ureteral inlets hypertrophies in the effort to empty the bladder despite the prostate impediment and

this gives rise to a bar across the base of the trigone behind which pouching occurs. From Dr. Alexander's specimens it is clear that the enlargement of the prostate is mainly glandular in character, the connective-tissue overgrowth in old cases being mainly the result of degeneration. They also make clear that the middle lobe is not so often the cause of the impediment to urination as has been thought. When the lateral lobes hypertrophy they also press the urethra downward, obstructing and lengthening it, and producing the long prostatic curve. The planes of tissue cleavage so to speak, *i. e.*, the connective-tissue capsules surrounding the glandular lobes of prostatic tissue, along which it is easy to shell them out of their beds in extirpation of the prostate, were prettily demonstrated in the microscopic specimens exhibited.

"Anthropological Rambles in the Orient, Especially in the Isle of Java, Profusely Illustrated by Stereopticon Views" by Dr. H. Ernest Schmid of Westchester County was next on the program. This was of special interest owing to our newly acquired interests in the Orient. The Dutch colonial system and methods of managing the natives was dwelt on. The thrifty Dutch have known how to rule the natives without friction, to respect their customs, and use their native aristocracy as under rulers, and have made the island one of the most prosperous colonies in the world. Dutch rule in Java will furnish some excellent lessons for the government of the Philippines.

SECOND DAY—MORNING SESSION.

The delegates from Connecticut, DRs. OSBORN and SWAIN of New Haven, presented a resolution from the Connecticut State Medical Society calling for a continuance of medical interest in the Senate Bill relating to vivisection in the District of Columbia, which has not been abandoned by its promoters, but is to be brought up again for consideration. Meantime the personal influence of individual members and the authority of medical societies is to be brought to bear to prevent the passage of an act that would inevitably lead to a curtailment of opportunities for the investigation of disease and remedies.

DR. WICKES WASHBURN of New York County read a paper on

TRUE AND FALSE MEDICAL AND OTHER CHARITIES.

He asserted once more his views to the effect that unorganized charity increases mendicancy, which is really a form of disease doctors owe it to themselves and their profession not to encourage. Legislation seems the best remedy for an evil that every one knows to exist. There is practically unanimity now as to the form which such legislation should take. Last year there had been some opposition on the part of the homeopaths, but that is now a thing of the past and the president of the State Homeopathic Society has expressed his willingness to work for the bill. There remains in opposition only certain private interests, but these will have to give way and may confidently be expected to yield to the evident necessity for reform in the matter during the present winter, when an-

other determined effort is to be made to secure the passage of the bill which failed before.

In the discussion which followed DR. FINDLER of Rensselaer County said that one of the first abuses of medical charity that must be corrected is the treatment of clergymen free of charge. They can afford to pay and their failure to do so is an encouragement to others to neglect their obligations toward the medical profession.

DR. LEROY BROOKS of Chenango County said that the abuse of medical charity by people who can afford to pay has been fostered by the hospitals and dispensaries of New York City. Country patients have learned that they can come to the city and for a nominal charge for board at a hospital have medical or surgical attendance. Doctors themselves must strike at the root of the evil here in New York City.

DR. DUDLEY of New York County said that the medical attendants in hospitals here in New York have no choice in the matter. They are dependent on lay managers of hospitals and can only follow rules laid down by them, or resign their positions. It is the practitioners themselves in small towns or in the country who have taught their patients how to come to New York hospitals and get treated free of charge.

DR. HOLT of Maine said that practitioners in small towns sometimes do this rather than call in a consultant in their own town and so confess that there is something they do not know.

DR. HENRY L. SWAIN of New Haven, Conn., then read a paper on

ACUTE FRONTAL SINUSITIS.

This affection is more frequent since the grip than it used to be. It occurs in groups and in people living under cognate circumstances. Its symptoms are frontal pain and tenderness, usually unilateral, often with redness and swelling on that side of the forehead. Its treatment consists in keeping the nostrils thoroughly open so as to secure good drainage. Cocain is a useful drug for this, because it lessens the turgescence of the mucous tissue, but it must never be given to the patient himself to use. Aqueous extract of suprarenal capsule is an excellent remedy also, and this can be safely entrusted to the patient.

DR. DELANCEY ROCHESTER said that he has found antipyrin in 2- or 3-per-cent. solution, used with cocain, 4-per-cent. solution, very effective; the astringent property of the latter was increased and the duration of the effects made longer.

DR. SOLOMON SOLIS COHEN of Philadelphia read a paper on

MEDICINE WITHOUT DRUGS.

Though by no means a disbeliever in the benefits to be derived from drugs, but rather, on the contrary, an ardent advocate of their efficiency in many diseased conditions, yet he is ready to admit that there are methods of treatment apart from the administration of drugs that do good. Altitude, by its stimulating effect on the blood-making organs, is an important therapeutic agent in anemia, animals and men living at high altitudes having

been found to have more red blood-cells to the cubic millimeter than those living at or near the sea-level. For the same reason altitude has a beneficial stimulating effect on consumptives.

The resisted movements, with the saline and carbonic-acid baths, systematized by the Brothers Schott, and used with such success at Bad Nauheim, are certainly an important addition to our means of treating heart cases. Hot-air baths have a distinct place in the modern treatment of disease. Then apart from drugs, because they use Nature's means of accomplishing certain objects, must be considered the organotherapeutic preparations. Suprarenal-gland extract is of excellent service according to his personal experience in the treatment of exophthalmic goiter. It is useful whenever it is desired to increase blood-pressure. Thyroid extract stimulates all the emunctories and is especially useful to increase the flow of urine. Thymus extract has a distinct effect upon general nutrition and aids in the anabolic processes that are concerned with the building up of tissue.

All of these therapeutic methods apart from drugs exemplify the modern principle that the physician is here not to cure disease but to assist Nature in getting well.

DR. CHARLES PHELPS of New York read a paper on
THE TREATMENT OF FRACTURED PATELLA BY OPEN OPERATION.

Dr. Phelps has now operated himself in 105 cases, and his assistants under his direction in twelve cases more of fracture of the patella. He now thinks that he can say with assurance that the routine practice of opening up and suturing the patella is justified by its results. Under the old methods the results are uncertain, and extension of the limb is never satisfactory. By the open method bony union is practically always secured, and extension is usually as good as before fracture. As to the question of non-union because of deficient blood-supply to the patella, he has never seen it. The parts of the bone are always of a good pinkish hue when exposed, and there is even oozing from the fractured surfaces in many cases. New York surgeons have now employed the operation in some 430 cases practically without fatality, so that the operation must be considered now to have won its place in surgery.

Some surgeons consider that one cannot determine definitely whether bony union has taken place or not unless one has the post-mortem specimens in his hands, and this fortunately cannot be granted them, but the substance uniting the fragments has answered to all the ordinary tests for bone, and in a certain number of autopsy specimens that had been secured after death from other causes, bony union has been found. To still hesitate as to bony union in most cases is to be hypercritical.

AFTERNOON SESSION.

The afternoon session opened with a discussion on "Intestinal Obstruction," DR. PARKER SYMS of New York County being the first speaker. He referred to the importance of the subject, the high death-rate, and the difficulty and necessity of early diagnosis. As a rule, at the beginning of a case but slight operative measures are neces-

sary, once laparotomy had been done, while later, in a weakened patient, there may be some of the most serious problems in the realm of abdominal surgery to deal with.

DR. E. D. FERGUSON of Rensselaer County discussed "The Causes of Acute Intestinal Obstruction, with a Description of Their Mechanism." Besides the ordinary intestinal obstruction there occurs a set of cases with practically the same symptoms as obstruction that are so deceitfully like it that he feels sure that in many of the operations where no morbid cause is found after laparotomy, the real factor at work has been a toxic one setting up intestinal paresis. Three times he has been saved from operating almost at the last moment by finding grounds for the existence of lead paresis. Other toxic substances and ptomain poisoning may give rise to a similar state of affairs. This is undoubtedly the etiology of the cases that come to autopsy after seemingly a typical history of intestinal obstruction, and yet present no anatomical lesion post-mortem as a cause for it.

DR. GEORGE D. STEWART of New York County followed with a paper on "The Causes of Chronic Intestinal Obstruction, with a Description of Their Mechanism." The causes of chronic intestinal obstruction cannot very easily be separated from those of acute obstruction and are not usually separated in the text-books. The two factors that most commonly lead to chronic obstruction are stricture and paresis of the intestine. Non-malignant stricture is due to cicatrization after the healing of an ulcer. Dysenteric ulcers are the most common cause. Any ulcer that has spread around the gut rather than longitudinally may be the cause. Though typhoid ulcers are often mentioned as etiological factors in the production of stricture it is doubtful if there is a single substantiated case of such a condition. Paresis of the intestine may develop as the result of impaction of feces or of nervous lesions, organic or functional, as in hysteria. Both these causes, accumulation of feces and nervous disturbance, may mutually interact to produce the parietic condition of the intestinal walls. Intestinal paresis may also be due to chronic catarrh or even to heredity.

DR. J. D. RUSHMORE of Kings County then read a paper on "The Diagnosis and Indications for Treatment of Acute Intestinal Obstruction." No single symptom or set of symptoms is pathognomonic. Any of the symptoms ordinarily present and considered characteristic may be absent under certain circumstances. It is impossible by the usual methods to make an absolutely assured and early diagnosis in individual cases. Early diagnosis is extremely important. It is evident then that exploratory laparotomy at an early stage is justifiable. Practically no harm is done, and the patient is given the best show for his life. At present the mortality is high, between 70 and 90 per cent. Medical treatment is worse than useless, and delay dangerous. Our new set of statistics in the affection should be gathered from a series of cases, not with the surgeon called in on the third day, but in charge of the case from the very beginning and ready to investigate the source of the trouble as soon as its serious character is manifest. He feels sure that under such cir-

cumstances the mortality would be 20 per cent. or under and a new surgical triumph recorded.

DR. LEROY BROOKS of Chenango County followed with a paper on "The Diagnosis and Indications for Treatment of Chronic Intestinal Obstruction." These do not differ much from those of the acute variety. Exploratory laparotomy would seem to be the hopeful outlook in the matter. The surgeon must be ready to follow up his diagnosis of obstruction by immediate operation. Sometimes it must be remembered that in chronic obstruction the distention of the gut by impacted feces above the obstacle may have given rise to rupture of the coats of the intestine or to ulcerative conditions which may rupture into the peritoneal cavity. He has seen stercoral ulcers in the cecum give rise to perforative peritonitis in this way, when the seat of obstruction was farther on in the transverse or descending colon.

DR. GOULEY of New York County then read a paper, entitled "Intestinal Obstruction Due to Impaction of Feces, Gall-stones, Foreign Bodies, etc." He recalled some of the varied articles which had found their way into, and in many cases through, the intestinal canal.

DR. JOHN F. ERDMANN of New York County followed with a paper on "Intestinal Obstruction Due to Intussusception and Volvulus."

(To be continued.)

REVIEWS.

A LABORATORY TEXT-BOOK OF PATHOLOGY FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By HORACE J. WHITACRE, B.S., M.D., Demonstrator of Pathology in the Medical College of Ohio (University of Cincinnati). Philadelphia: P. Blakiston's Son, & Co., 1897.

THIS book is designed for use by medical students during laboratory courses in pathology and as an aid for the correct interpretation and study of the sections which are given to the students in our medical colleges. The work is divided into chapters, dealing successively with inflammation, infectious granulomata, degenerations, tumors, the liver, respiratory system, thyroid gland, spleen, gastro-intestinal canal, heart, arteries, kidney, organs of generation, and the blood.

Some of the sections show much care and study in their preparation, others are too meager, and in consequence the text of the book is not even. The work contains more than one hundred illustrations, the greater number being reproductions from photomicrographs, in order to demonstrate to the student "the actual picture that is given by the specimen under his microscope." We are sorry to say that the author's good intentions in this matter are sadly disappointing and in most instances it is barely possible even to diagnose the organ under consideration, to say nothing of the pathologic changes. Even the roughest drawing is far preferable to a mediocre photomicrograph.

With this exception the book contains much that will be of assistance to the student and will serve as a valuable aid in laboratory work.

THERAPEUTIC HINTS.

For *Trachoma*, as well as for catarrhal conjunctivitis with or without implication of the cornea, EBERSON uses a 50 per cent. watery solution of ichthyol, to which a little glycerin is added. He finds that the ichthyol is much better borne than other local applications, and that it serves to effect a more speedy cure.

A Palatable Emulsion of Bromoform.—

℞ Bromoformi	3 i
Tinct. tolutanæ	3 ii
Syr. tolutani	℥ i
Mucil. acaciæ	3 iv
Aq. menth. viridis	q. s. ad. ℥ iv.

Mix the bromoform with the tincture of tolu, and add gradually to a mixture of the syrup and the mucilage. Shake well and dilute with the spearmint water.—*Sco-ville*.

For Dysmenorrhœa.—

℞ Ext. conii alc.	gr. xv
Ext. scammonii alc.	} aa gr. v.
Ext. opii	

M. Ft. pil. No. X. Sig. One pill three times a day.—*Garrigues*.

Stimulating Expectorant in Bronchopneumonia.—

℞ Ammonii carbonat.	gr. xxiv
Syr. tolutani	3 vi
Spts. vini gallici	3 iii
Syr. senegæ	3 iiiss
Syr. acaciæ	q. s. ad. ℥ iii.

M. Sig. One teaspoonful every two hours for a child two or three years of age.—*Goodhart and Starr*.

Linament for Counter Irritation in Chest Affections.—

℞ Aceti cantharidis	3 ii
Spts. camphoræ	℥ iii.

M. Ft. linimentum. Sig. Apply to chest at night.—*Guyon*.

For *Senile Pruritus*.—In addition to careful attention to the general health and the avoidance of coffee and alcoholic beverages the use of the following ointment is said to afford relief:

℞ Resorcin	gr. xv
Ichthyol	3 ss
Lanolin	℥ i.

M. Ft. ungt. Sig. For external application.

For *Acute Non-diphtheritic Tonsillar Affections*.—Salol is highly recommended by *de la Carrière* for its action in these cases. The pain and dysphagia are greatly relieved, the duration of the malady is lessened, and abscess formation prevented. Digestion is not disturbed so that the drug may be taken with meals. Sixty grains a day may be given to an adult, but the use of the drug must be suspended if the urine becomes dark. He prescribes as follows:

℞ Salol	gr. xxx
Ol. amygdalæ dulc.	3 i
Syr. simplicis	} aa ℥ iii.
Aq. dest.	

M. Sig. Take in divided doses within twenty-four hours.